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=> file biosis caba caplus lifesci medline
=> e momotani e/au
E1            1     MOMOTANDI EIKI/AU
E2            1     MOMOTANI A/AU
E3          167 --> MOMOTANI E/AU
E4            3     MOMOTANI EI ICHI/AU
E5           65     MOMOTANI EIICHI/AU
E6            2     MOMOTANI EIJI/AU
E7            8     MOMOTANI EIKI/AU
E8           27     MOMOTANI H/AU
E9           38     MOMOTANI HIROSHI/AU
E10           4     MOMOTANI HISAKO/AU
E11           1     MOMOTANI JUNICHI/AU
E12           2     MOMOTANI K/AU

=> s e3-e7 and mycobact?
L1           52 ("MOMOTANI E"/AU OR "MOMOTANI EI ICHI"/AU OR "MOMOTANI EIICHI"/A
                U OR "MOMOTANI EIJI"/AU OR "MOMOTANI EIKI"/AU) AND MYCOBACT?

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2           20 DUP REM L1 (32 DUPLICATES REMOVED)

=> d bib ab kwic 1-
YOU HAVE REQUESTED DATA FROM 20 ANSWERS - CONTINUE? Y/(N):y

L2   ANSWER 1 OF 20  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2007:428046  CAPLUS <<LOGINID::20080325>>
DN   146:416306
TI   Primer sets for detection of expression level of urocortin for evaluation
     of progressing of johne's disease in livestock
IN     ***Momotani, Eiichi***  ; Mori, Yasuyuki; Wang, Hong Yu
PA   National Agriculture Bio-Oriented Research Organization, Japan
SO   Jpn. Kokai Tokkyo Koho, 15pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   JP 2007097490        A     20070419    JP 2005-291868         20051005
PRAI JP 2005-291868              20051005
AB   This invention provides primer sets for detection of expression level of
     urocortin in livestock blood sample by realtime-PCR.  The cDNA sequence of
     Bos taurus urocortin were disclosed.  The invention also provides method
     for prepn. of std. curve for real-time PCR by detecting the expression
     level of urocortin gene in Bos taurus cells immunized with antigen from
       ***Mycobacterium***   paratuberculosis.  The method provided in this
     invention can be used for evaluation of progressing of johne's disease in
     livestock in early stage of infection.
IN     ***Momotani, Eiichi***  ; Mori, Yasuyuki; Wang, Hong Yu
AB   .  .  .  curve for real-time PCR by detecting the expression level of
     urocortin gene in Bos taurus cells immunized with antigen from
       ***Mycobacterium***   paratuberculosis.  The method provided in this
     invention can be used for evaluation of progressing of johne's disease in
     livestock in.  .  .
IT     ***Mycobacterium***   avium paratuberculosis
```

(infection of; primer sets for detection of expression level of urocortin for evaluation of progressing of johne's disease in livestock)

L2 ANSWER 2 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 1
AN 2007:589654 BIOSIS <<LOGINID::20080325>>
DN PREV200700590889
TI Corticotropin-releasing hormone and urocortin expression in peripheral blood cells from experimentally infected cattle with ***Mycobacterium*** avium subsp paratuberculosis.
AU Wang, Hongyu; Aodon-geril; Shu, Yujing; Momotani, Yuriko; Wang, Xiaofei; Mori, Yasuyuki; ***Momotani, Eiichi*** [Reprint Author]
CS Natl Inst Anim Hlth, Res Team Paratuberculosis, 3-1-5 Kan-nondai, Tsukuba, Ibaraki 3050856, Japan
momotani@affrc.go.jp
SO Microbes and Infection, (JUL 2007) Vol. 9, No. 9, pp. 1061-1069.
ISSN: 1286-4579.
DT Article
LA English
ED Entered STN: 21 Nov 2007
Last Updated on STN: 21 Nov 2007
AB Urocortin (UCN) is a new neuropeptide of the corticotrophin-releasing hormone (CRH) family which plays an important role in immune responses. ***Mycobacterium*** avium subspecies paratuberculosis (Map) is the etiological agent of paratuberculosis (Johne's disease). The role of UCN or CRH in the pathogenesis of Map-infection is unknown. In the present study, we first cloned the bovine UCN gene and demonstrated the profile of UCN or CRH expression in peripheral blood cells from Map-infected cattle and uninfected controls by real-time reverse transcription-polymerase chain reaction (RT-PCR) and ELISA analysis. These data are the first observations of the characteristic kinetics of these neuropeptides in Map-infection. UCN or CRH expression in non-stimulated blood samples from infected cattle was higher than that in similarly treated samples from uninfected controls; however, exposure to Map lysate and live Map resulted in down-regulated expression of UCN in infected cattle compared to their counterparts from uninfected controls. These results have provided a direction in understanding the pathogenesis of paratuberculosis and improving diagnostic methods for Map-infection. (C) 2007 Elsevier Masson SAS. All rights reserved.
TI Corticotropin-releasing hormone and urocortin expression in peripheral blood cells from experimentally infected cattle with ***Mycobacterium*** avium subsp paratuberculosis.
AU Wang, Hongyu; Aodon-geril; Shu, Yujing; Momotani, Yuriko; Wang, Xiaofei; Mori, Yasuyuki; ***Momotani, Eiichi*** [Reprint Author]
AB . . Urocortin (UCN) is a new neuropeptide of the corticotrophin-releasing hormone (CRH) family which plays an important role in immune responses. ***Mycobacterium*** avium subspecies paratuberculosis (Map) is the etiological agent of paratuberculosis (Johne's disease). The role of UCN or CRH in the. . .
ORGN . . .
Chordata; Animalia
Organism Name
bovine (common): host
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms;
Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L2 ANSWER 3 OF 20 CABA COPYRIGHT 2008 CABI on STN
AN 2008:43487 CABA <<LOGINID::20080325>>
DN 20083029329
TI Molecular strategies for studying hosts of Johne's disease
mycobacterium
AU ***Momotani, E.*** ; Aodonqeril; Momotani, Y.
SO Journal of Veterinary Medicine, Japan, (2007) Vol. 60, No. 10, pp. 807-813. 41 ref.
Publisher: Buneido Publishing Company Ltd. Tokyo
ISSN: 0447-0192
URL: http://www.buneido-syuppan.com
CY Japan
DT Journal
LA Japanese
ED Entered STN: 7 Feb 2008
Last Updated on STN: 7 Feb 2008
TI Molecular strategies for studying hosts of Johne's disease
mycobacterium .
AU ***Momotani, E.*** ; Aodonqeril; Momotani, Y.
BT ***Mycobacterium*** avium; ***Mycobacterium*** ;
Mycobacteriaceae ; Firmicutes; bacteria; prokaryotes
ORGN ***Mycobacterium*** avium subsp. paratuberculosis

L2 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:283672 CAPLUS <<LOGINID::20080325>>
DN 142:334896
TI Method for diagnosing johne's disease
IN ***Momotani, Eiichi*** ; Mori, Yasuyuki; Hikono, Hirokazu; Buza, Joram Josephat
PA Incorporated Administrative Agency National Agriculture and Bio-Oriented Research Organization, Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005029079	A1	20050331	WO 2003-JP11845	20030917
W: AU, JP, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
AU 2003272880	A1	20050411	AU 2003-272880	20030917
US 2008038758	A1	20080214	US 2007-572514	20070426
PRAI WO 2003-JP11845	A	20030917		

AB A method for diagnosing johne's disease is provided, with which an animal infected with ***Mycobacterium*** paratuberculosis (Johne's) can be

diagnosed at a high sensitivity in the inapparent infection stage before the specific antibody level begins to increase, and a large no. of specimens can be treated. The method is characterized in that it comprises collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** paratuberculosis antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood. The method is also characterized in that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA method. Also provided is a method for diagnosing ***mycobacteriosis*** , which is characterized by comprising collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IN ***Momotani, Eiichi*** ; Mori, Yasuyuki; Hikono, Hirokazu; Buza, Joram Josephat

AB A method for diagnosing johne's disease is provided, with which an animal infected with ***Mycobacterium*** paratuberculosis (Johne's) can be diagnosed at a high sensitivity in the inapparent infection stage before the specific antibody level begins. . . is characterized in that it comprises collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** paratuberculosis antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood. The. . . that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA method. Also provided is a method for diagnosing ***mycobacteriosis*** , which is characterized by comprising collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood.

IT Animals
Blood analysis
Diagnosis
Mycobacterium avium paratuberculosis
(method for diagnosing johne's disease by measuring blood IFN.gamma. by ELISA)

L2 ANSWER 5 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 2

AN 2004:438665 BIOSIS <<LOGINID::20080325>>

DN PREV200400437489

TI Neutralization of interleukin-10 significantly enhances gamma interferon expression in peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.

AU Buza, Jorarn J.; Hikono, Hirokazu; Mori, Yasuyuki; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; ***Momotani, Eiichi*** [Reprint Author]

CS ParaTB and Inflammatory Bowel Dis Res Team, NIAH, 3-1-5 Kannondai, Tsukuba, Ibaraki, 3050856, Japan
momotani@affrc.go.jp

SO Infection and Immunity, (April 2004) Vol. 72, No. 4, pp. 2425-2428. print. ISSN: 0019-9567 (ISSN print).

DT Article

LA English

ED Entered STN: 17 Nov 2004

Last Updated on STN: 17 Nov 2004

AB Monoclonal antibody neutralization of interleukin-10 (IL-10) increased Johnin purified protein derivative-induced whole-blood gamma interferon (IFN-gamma) secretion 23-fold and also increased IFN-gamma secretion ninefold following in vitro ***Mycobacterium*** avium subsp. paratuberculosis infection of peripheral blood mononuclear cells. These results demonstrate the suppressive effect of IL-10 on immune responses to M. avium subsp. paratuberculosis infection in cattle.

TI. . . interleukin-10 significantly enhances gamma interferon expression in peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.

AU. . . Buza, Jorarn J.; Hikono, Hirokazu; Mori, Yasuyuki; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; ***Momotani, Eiichi*** [Reprint Author]

AB. . . increased Johnin purified protein derivative-induced whole-blood gamma interferon (IFN-gamma) secretion 23-fold and also increased IFN-gamma secretion ninefold following in vitro ***Mycobacterium*** avium subsp. paratuberculosis infection of peripheral blood mononuclear cells. These results demonstrate the suppressive effect of IL-10 on immune responses. . .

ORGN . . .
Animalia
Organism Name
cattle (common): immune responses
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies)
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L2 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:885718 CAPLUS <<LOGINID::20080325>>
DN 141:363746
TI Development of early-stage diagnostic method for Johne disease by using anti-IL-10 antibody
AU ***Momotani, Eiichi*** ; Mori, Yasuyuki
CS Natl. Agric. Bio-oriented Res. Org., Natl. Inst. Animal Health, Tsukuba, 305-0856, Japan
SO BRAIN Techno News (2004), 105, 18-24
CODEN: BTEEEC; ISSN: 1345-5958
PB Nogyo, Seibutsukei Tokutei Sangyo Gijutsu Kenkyu Kiko, Seibutsukei Tokutei Sangyo Gijutsu Kenkyu Shien Senta
DT Journal; General Review
LA Japanese
AB A review on early-stage diagnosis of Johne's disease (paratuberculosis) in cattle by modified interferon .gamma. ELISA assay using IL-10 neutralizing antibody, and its effectiveness.
AU ***Momotani, Eiichi*** ; Mori, Yasuyuki
IT Bos taurus

Mycobacterium avium paratuberculosis (early-stage diagnosis method for Johne's disease using anti-IL-10 antibody)

L2 ANSWER 7 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 3
AN 2004:64047 BIOSIS <<LOGINID::20080325>>
DN PREV200400065534
TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral blood of experimentally infected cattle.
AU Buza, Joram J.; Mori, Yasuyuki; Bari, Abusaleh M.; Hikono, Hirokazu; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; ***Momotani, Eiichi*** [Reprint Author]
CS Paratuberculosis and Inflammatory Bowel Disease Research Team, NIAH, 3-1-5 Kan-nondai, Tsukuba, 305-0856, Japan
momotani@affrc.go.jp
SO Infection and Immunity, (December 2003) Vol. 71, No. 12, pp. 7223-7227. print.
ISSN: 0019-9567 (ISSN print).
DT Article
LA English
ED Entered STN: 28 Jan 2004
Last Updated on STN: 28 Jan 2004
AB Blood from cattle with subclinical ***Mycobacterium*** avium subsp. paratuberculosis infection was stimulated with M. avium subsp. paratuberculosis antigens, and expression of interleukin-1beta (IL-1beta), tumor necrosis factor alpha (TNF-alpha), RANTES, monocyte chemoattractant protein 1 (MCP-1), and IL-8 was measured. Expression of TNF-alpha, RANTES, and MCP-1 was lower in infected than in uninfected cattle. The reduced response may weaken protective immunity and perpetuate infection.
TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral. . .
AU Buza, Joram J.; Mori, Yasuyuki; Bari, Abusaleh M.; Hikono, Hirokazu; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; ***Momotani, Eiichi*** [Reprint Author]
AB Blood from cattle with subclinical ***Mycobacterium*** avium subsp. paratuberculosis infection was stimulated with M. avium subsp. paratuberculosis antigens, and expression of interleukin-1beta (IL-1beta), tumor necrosis factor. . .
ORGN . . .
Animalia
Organism Name
cattle (common): host, breed-Holstein
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes

Bacteria, Eubacteria, Microorganisms

L2 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:399194 CAPLUS <<LOGINID::20080325>>
DN 140:39839
TI Studies on diagnostic methods for bovine paratuberculosis
AU Mori, Yasuyuki; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; ***Momotani, Eiichi***
CS Immune System Section, Department of Immunology, National Institute of Animal Health, Tsukuba, 305-0856, Japan
SO Dobutsu Eisei Kenkyusho Kenkyu Hokoku (2003), Volume Date 2002, 109, 33-42
CODEN: DEKKC9; ISSN: 1347-2542
PB Nogyo Gijutsu Kenkyu Kiko Dobutsu Eisei Kenkyusho
DT Journal
LA Japanese
AB Current diagnostic tests for paratuberculosis principally rest on serol. assay, bacterial culture and the johnin skin test. However, diagnostic tests that are both sensitive and specific for detecting all subclinically affected animals have not yet been found. Therefore, a no. of studies have been conducted in order to find rapid and accurate diagnostic methods for paratuberculosis. As a result, the following have been found. (1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in fecal samples. (2) In the interferon gamma (IFN-.gamma.) assay using johnin purified protein deriv. (J-PPD), bovine tuberculin PPD and Con A (Con A), IFN-.gamma. responses against J-PPD were the highest in affected animals. On the contrary those of Con A were the highest in healthy animals. Interpretation of the IFN-.gamma. assay by the higher IFN-.gamma. responses against J-PPD than those of Con A is preferable as one of the diagnostic criteria. (3) Monoclonal antibody (711-1-1) which recognizes the lipoarabinomannan antigen of M. avium subsp. paratuberculosis did not react with M. avium subsp. avium, and showed potential usefulness in the serol. tests. (4) A recombinant alkyl hydroperoxide reductase C of M. avium subsp. paratuberculosis has been prepd. and successfully applied to induce IFN-.gamma. from peripheral blood mononuclear cells of animals infected with M. avium subsp. paratuberculosis. (5) In the course of study on the role of cytokines, monocyte chemoattractant protein-1 seems to be involved in the pathogenesis of paratuberculosis.
AU Mori, Yasuyuki; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; ***Momotani, Eiichi***
AB . . . following have been found. (1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in fecal samples. (2) In the interferon gamma (IFN-.gamma.) assay using johnin purified protein deriv. (J-PPD), bovine. . .
ST cattle ***Mycobacterium*** paratuberculosis infection surface antigen IFN induction test; alkyl hydroperoxide reductase antigen cattle IFN induction ***Mycobacterium*** ; reverse transcription PCR monocyte chemoattractant protein mRNA assay
IT Bos taurus
Infection
Mycobacterium avium paratuberculosis
(studies on diagnostic methods for bovine paratuberculosis)

L2 ANSWER 9 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

DUPLICATE 4
AN 2003:329566 BIOSIS <<LOGINID::20080325>>
DN PREV200300329566
TI Studies on the diagnostic methods for bovine paratuberculosis.
AU Mori, Yasuyuki [Reprint Author]; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; ***Momotani, Eiichi***
CS Immune System Section, Department of Immunology, National Institute of Animal Health, 3-1-5 Kannondai, Tsukuba, Ibaraki, 305-0856, Japan yamori@affrc.go.jp
SO Bulletin of the National Institute of Animal Health, (2002) No. 109, pp. 33-42. print.
ISSN: 1347-2542 (ISSN print).
DT Article
LA Japanese
ED Entered STN: 16 Jul 2003
Last Updated on STN: 16 Jul 2003
AB Current diagnostic tests for paratuberculosis principally rest on serological assay, bacterial culture and the johnin skin test. However, diagnostic tests that are both sensitive and specific for detecting all subclinically affected animals have not yet been found. Therefore, a number of studies have been conducted in order to find rapid and accurate diagnostic methods for paratuberculosis. As a result, the following have been found; 1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in faecal samples. 2) In the interferon gamma (IFN-gamma) assay using johnin purified protein derivative (J-PPD), bovine tuberculin PPD and concanavalin A (Con A), IFN-gamma responses against J-PPD were the highest in affected animals. On the contrary those of Con A were the highest in healthy animals. Interpretation of the IFN-gamma assay by the higher IFN-gamma responses against J-PPD than those of Con A is preferable as one of the diagnostic criteria. 3) Monoclonal antibody (711-1-1) which recognizes the lipoarabinomannan antigen of M. avium subsp. paratuberculosis did not react with M. avium subsp. avium, and showed potential usefulness in the serological tests. 4) A recombinant alkyl hydroperoxide reductase C of M. avium subsp. paratuberculosis has been prepared and successfully applied to induce IFN-gamma from peripheral blood mononuclear cells of animals infected with M. avium subsp. paratuberculosis. 5) In the course of study on the role of cytokines, monocyte chemoattractant protein-1 seems to be involved in the pathogenesis of paratuberculosis.
AU Mori, Yasuyuki [Reprint Author]; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; ***Momotani, Eiichi***
AB. . . following have been found; 1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in faecal samples. 2) In the interferon gamma (IFN-gamma) assay using johnin purified protein derivative (J-PPD), bovine. . .
ORGN . . .
Chordata; Animalia
Organism Name
bovine (common): host
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa

Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen, strain-ATCC 19698, strain-Kag-1
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L2 ANSWER 10 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 2000:469951 BIOSIS <<LOGINID::20080325>>
DN PREV200000469951
TI Adhesion molecules and chemokines in granulomas by ***Mycobacterium*** avium subspecies paratuberculosis in TNF alpha deficient mice.
AU ***Momotani, E.*** ; Miyama, M.; To, T. L.; Yoshihara, K.; Gotoh, H.
SO Immunology Letters, (September, 2000) Vol. 73, No. 2-3, pp. 194. print. Meeting Info.: 24th European Immunology Meeting of the European Federation of Immunological Societies (EFIS). Poznan, Poland. September 23-26, 2000. European Federation of Immunological Societies.
CODEN: IMLED6. ISSN: 0165-2478.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 1 Nov 2000
Last Updated on STN: 10 Jan 2002
TI Adhesion molecules and chemokines in granulomas by ***Mycobacterium*** avium subspecies paratuberculosis in TNF alpha deficient mice.
AU ***Momotani, E.*** ; Miyama, M.; To, T. L.; Yoshihara, K.; Gotoh, H.
IT Major Concepts
Immune System (Chemical Coordination and Homeostasis); Infection
IT Diseases
Mycobacterium avium paratuberculosis granuloma: bacterial disease, clinica;l signs, convalescence, pathological changes
IT Chemicals & Biochemicals
RANTES: granuloma expression; fibronectin: epithelioid granuloma. . .
ORGN . . .
model, tumor necrosis factor-alpha deficiency, wild type
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis: pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L2 ANSWER 11 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 5
AN 1993:373039 BIOSIS <<LOGINID::20080325>>
DN PREV199396058714
TI Immunohistochemical distribution of S-100 alpha-positive cells in bovine ***mycobacterial*** and non- ***mycobacterial*** granulomas.
AU ***Momotani, E.*** [Reprint author]; Kubo, M. [Reprint author];

Ishikawa, Y.; Matsubara, Y. [Reprint author]; Nakajima, Y.; Yoshino, T.
CS Natl. Inst. Anim. Health, 3-1-1, Kan-nondai, Tsukuba, 305, Japan
SO Journal of Comparative Pathology, (1993) Vol. 108, No. 3, pp. 291-301.
CODEN: JCVPAR. ISSN: 0021-9975.
DT Article
LA English
ED Entered STN: 6 Aug 1993
Last Updated on STN: 6 Aug 1993
AB By means of immunohistochemistry, the distribution of the alpha-subunit (S-100-alpha) and the beta-subunit (S-100-beta) of S-100 protein was studied in bovine granulomas caused by Actinomyces bovis, Actinobacillus lignieresi, Actinomyces (Corynebacterium) pyogenes, Pseudomonas aeruginosa, Staphylococcus aureus, ***Mycobacterium*** bovis and ***Mycobacterium*** paratuberculosis. S-100-alpha-positive epithelioid cells or dendritic cells were scattered among the predominantly S-100-alpha-negative cells of the mononuclear phagocyte system (MPS). S-100-beta was not found in the MPS cells of granulomas but was observed in the endothelial cells of blood vessels. A positive reaction to S-100 was also seen in normal cells in the lymphoid and mammary tissues. ***Mycobacterial*** granulomas contained more S-100-alpha-positive cells
than did non- ***mycobacterial*** ones.
TI Immunohistochemical distribution of S-100 alpha-positive cells in bovine ***mycobacterial*** and non- ***mycobacterial*** granulomas.
AU ***Momotani, E.*** [Reprint author]; Kubo, M. [Reprint author]; Ishikawa, Y.; Matsubara, Y. [Reprint author]; Nakajima, Y.; Yoshino, T.
AB. . . S-100 protein was studied in bovine granulomas caused by Actinomyces bovis, Actinobacillus lignieresi, Actinomyces (Corynebacterium) pyogenes, Pseudomonas aeruginosa, Staphylococcus aureus, ***Mycobacterium*** bovis and ***Mycobacterium*** paratuberculosis. S-100-alpha-positive epithelioid cells or dendritic cells were scattered among the predominantly S-100-alpha-negative cells of the mononuclear phagocyte system (MPS).. . . of blood vessels. A positive reaction to S-100 was also seen in normal cells in the lymphoid and mammary tissues. ***Mycobacterial*** granulomas contained more S-100-alpha-positive cells
than did non- ***mycobacterial*** ones.
ORGN . . .
Classifier
Micrococcaceae 07702
Super Taxa
Gram-Positive Cocci; Eubacteria; Bacteria; Microorganisms
Organism Name
Micrococcaceae
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms;
Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Pasteurellaceae 06703

Super Taxa
Facultatively Anaerobic Gram-Negative Rods; Eubacteria; Bacteria; Microorganisms
Organism. . .

L2 ANSWER 12 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 6
AN 1992:369927 BIOSIS <<LOGINID::20080325>>
DN PREV199294051977; BA94:51977
TI IMMUNOHISTOCHEMICAL IDENTIFICATION OF FERRITIN LACTOFERRIN AND TRANSFERRIN IN LEPROSY LESIONS OF HUMAN SKIN BIOPSIES.
AU ***MOMOTANI E*** [Reprint author]; WUSCHER N; RAVISSE P; RASTOGI N
CS LAB IMMUNOPATHOL, NATIONAL INST ANIMAL HEALTH, 3-1-1 KANNONDAI, TSUKUBA, IBARAKI 305, JPN
SO Journal of Comparative Pathology, (1992) Vol. 106, No. 3, pp. 213-220. CODEN: JCVPAR. ISSN: 0021-9975.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 9 Aug 1992
Last Updated on STN: 9 Aug 1992
AB Granulomatous lesions of human leprosy contained ferritin and lactoferrin but little or no transferrin, as demonstrated by the avidin-biotin complex immunoperoxidase method. Lactoferrin was found in the neutrophils. These results suggested that the cells of the host mononuclear phagocyte system in leprosy granulomas provide an adequate nutritional environment for iron acquisition by ***Mycobacterium*** leprae. A possible role of iron binding proteins in the granulomas is discussed in relation to previous data on bovine paratuberculous granulomas.
AU ***MOMOTANI E*** [Reprint author]; WUSCHER N; RAVISSE P; RASTOGI N
AB. . . the cells of the host mononuclear phagocyte system in leprosy granulomas provide an adequate nutritional environment for iron acquisition by ***Mycobacterium*** leprae. A possible role of iron binding proteins in the granulomas is discussed in relation to previous data on bovine. . .
IT Miscellaneous Descriptors
MYCOBACTERIUM -LEPRAE NEUTROPHILS IRON BINDING PROTEINS
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia;. . .

L2 ANSWER 13 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 7
AN 1991:182263 BIOSIS <<LOGINID::20080325>>
DN PREV199191097012; BA91:97012
TI IMMUNOHISTOCHEMICAL STUDY OF BOVINE LYMPH NODES WITH ANTIBODIES AGAINST S100 PROTEIN SUBUNITS COMPARISON BETWEEN LYMPH NODES OF HEALTHY AND ***MYCOBACTERIUM*** -PARATUBERCULOSIS INFECTED CATTLE.
AU ***MOMOTANI E*** [Reprint author]; YOSHINO T; ISHIKAWA Y; NAKAJIMA Y

CS HOKKAIDO BRANCH LAB, NATL INST ANIM HEALTH, HITSUJIGAOKA-4, TOYOHIRA, SAPPORO 004, JPN
SO Research in Immunology, (1990) Vol. 141, No. 8, pp. 771-782.
CODEN: RIMME5. ISSN: 0923-2494.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 19 Apr 1991
Last Updated on STN: 20 Apr 1991
AB Using immunohistochemistry, the differential distribution of the .alpha. subunit (S100.alpha.) and .beta. subunit (S100.beta.) of S100 protein was studied in mesenteric lymph nodes from normal or ***Mycobacterium*** paratuberculosis-infected cattle. In epithelioid cell granulomas, S100.alpha.-positive epitheloid cells and some giant cells were scattered among S100.alpha.-negative cells, which were predominant. The S100.beta.-positive and -negative cells contained acid-fast bacilli. The presence of S100.beta.-positive cells was not demonstrated in the granulomas. In normal component cells in the lymph nodes, follicular dendritic cells in the germinal centres and endothelium of lymphatic sinus and lymph vessels were positive for S100.alpha.. S100.beta. was positive only in the endothelial cells of blood vessels. Results shown in the present paper are discussed in light of results obtained in other work on human tissues using the same sources of antibodies.
TI IMMUNOHISTOCHEMICAL STUDY OF BOVINE LYMPH NODES WITH ANTIBODIES AGAINST S100 PROTEIN SUBUNITS COMPARISON BETWEEN LYMPH NODES OF HEALTHY AND ***MYCOBACTERIUM*** -PARATUBERCULOSIS INFECTED CATTLE.
AU ***MOMOTANI E*** [Reprint author]; YOSHINO T; ISHIKAWA Y; NAKAJIMA Y
AB . . the .alpha. subunit (S100.alpha.) and .beta. subunit (S100.beta.) of S100 protein was studied in mesenteric lymph nodes from normal or ***Mycobacterium*** paratuberculosis-infected cattle. In epithelioid cell granulomas, S100.alpha.-positive epitheloid cells and some giant cells were scattered among S100.alpha.-negative cells, which were. . .
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia;. . .

L2 ANSWER 14 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 8
AN 1989:223916 BIOSIS <<LOGINID::20080325>>
DN PREV198987115533; BA87:115533
TI IMMUNOHISTOCHEMICAL LOCALIZATION OF IMMUNOGLOBULINS IN BOVINE GRANULOMATOUS LESIONS.
AU ***MOMOTANI E*** [Reprint author]; KUBO M; ISHIKAWA Y; YOSHINO T
CS HOKKAIDO BRANCH LAB, NATL INST ANIM HEALTH, HITSUJIGAOKA 4, TOYOHIRA, SAPPORO 004 JPN
SO Journal of Comparative Pathology, (1989) Vol. 100, No. 2, pp. 129-136.
CODEN: JCVPAR. ISSN: 0021-9975.
DT Article
FS BA

LA ENGLISH
ED Entered STN: 7 May 1989
Last Updated on STN: 7 May 1989
AB The immunohistochemical distribution of IgG, IgA and IgM in granulomatous lesions caused by Actinomyces bovis, Actinobacillus lignieresii, Actinomyces (Corynebacterium) pyogenes, Pseudomonas aeruginosa, Staphylococcus aureus and ***Mycobacterium*** bovis was studied. Numerous IgG-containing cells (plasma cells) were distributed in the peripheral connective tissue layers, but not in the epithelioid cell layer. A few scattered IgA- and IgM-containing cells were found in all the lesions examined. ***Mycobacterial*** granulomas contained fewer IgG-cells than did non- ***mycobacterial*** granulomas. Eosinophilic club-shaped bodies were found in A. bovis, A. lignieresi, P. aeruginosa and S. aureus, but they were generally negative for IgG, IgA and IgM.
AU ***MOMOTANI E*** [Reprint author]; KUBO M; ISHIKAWA Y; YOSHINO T
AB. . . IgA and IgM in granulomatous lesions caused by Actinomyces bovis, Actinobacillus lignieresii, Actinomyces (Corynebacterium) pyogenes, Pseudomonas aeruginosa, Staphylococcus aureus and ***Mycobacterium*** bovis was studied. Numerous IgG-containing cells (plasma cells) were distributed in the peripheral connective tissue layers, but not in the epithelioid cell layer. A few scattered IgA- and IgM-containing cells were found in all the lesions examined. ***Mycobacterial*** granulomas contained fewer IgG-cells than did non- ***mycobacterial*** granulomas. Eosinophilic club-shaped bodies were found in A. bovis, A. lignieresi, P. aeruginosa and S. aureus, but they were generally. . .
IT Miscellaneous Descriptors
ACTINOMYCES-BOVIS ACTINOBACILLUS-LIGNIERESII ACTINOMYCES-PYOGENES PSEUDOMONAS-AERUGINOSA STAPHYLOCOCCUS-AUREUS ***MYCOBACTERIUM*** -BOVIS IMMUNOGLOBULIN G IMMUNOGLOBULIN A IMMUNOGLOBULIN M PERIPHERAL CONNECTIVE TISSUE
ORGN . . .
Nonsporing Gram-Positive Rods 08890
Super Taxa
Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia;. . .

L2 ANSWER 15 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 9
AN 1988:483621 BIOSIS <<LOGINID::20080325>>
DN PREV198886114931; BA86:114931
TI THE DISTRIBUTION OF FERRITIN LACTOFERRIN AND TRANSFERRIN IN GRANULOMATOUS LYMPHADENITIS OF BOVINE PARATUBERCULOSIS.
AU ***MOMOTANI E*** [Reprint author]; WHIPPLE D L; THIERMANN A B
CS HOKKAIDO BRANCH LAB, NATL INST ANIM HEALTH, HITSUJIGAOKA-4, SAPPORO 004

JPN
SO Journal of Comparative Pathology, (1988) Vol. 99, No. 2, pp. 205-214.
CODEN: JCVPAR. ISSN: 0021-9975.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 1 Nov 1988
Last Updated on STN: 1 Nov 1988
AB Immunohistochemical examination of iron-binding proteins was carried out in the formalin-fixed mesenteric lymph nodes of normal cattle and of cattle with paratuberculosis. Ferritin (FT) and lactoferrin (LF) were found in the granulomas in ileal lymph nodes from six infected cattle. A weak reaction for transferrin (TF) was found in granulomas of a lymph node from one of the infected cattle. FT was found in the macrophages in the medullary sinuses of normal and infected nodes; however, the reaction in infected nodes was generally stronger than that in normal ones. LF in the macrophages was found in only two infected nodes. Neutrophils in both normal and infected cattle always reacted strongly for LF. The TF was always found in the blood vessels and intracellular space. These results suggest that: (1) FT and LF may be important in vivo sources of iron for ***Mycobacterium*** paratuberculosis, since their own iron-binding compounds are considered to aquire iron from FT and LF in vitro; (2) the increase in FT and LF in the granulomas may be related to inflammatory hyposideraemia associated with paratuberculosis and (3) epithelioid and giant cells may have a different iron metabolism, from normal macrophages.
AU ***MOMOTANI E*** [Reprint author]; WHIPPLE D L; THIERMANN A B
AB. . . and intracellular space. These results suggest that: (1) FT and LF may be important in vivo sources of iron for ***Mycobacterium*** paratuberculosis, since their own iron-binding compounds are considered to aquire iron from FT and LF in vitro; (2) the increase. . .
IT Miscellaneous Descriptors
CATTLE ***MYCOBACTERIUM*** -PARATUBERCULOSIS MACROPHAGE NEUTROPHIL HYPOSIDEREMIA
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia;. . .

L2 ANSWER 16 OF 20 CABA COPYRIGHT 2008 CABI on STN DUPLICATE 10
AN 88:65054 CABA <<LOGINID::20080325>>
DN 19882208990
TI Role of M cells and macrophages in the entrance of ***Mycobacterium*** paratuberculosis into domes of ileal Peyer's patches in calves
AU ***Momotani, E.*** ; Whipple, D. L.; Thiermann, A. B.; Cheville, N. F.
CS Nat. Anim. Dis. Center, PO Box 70, Ames, IA 50010, USA.
SO Veterinary Pathology, (1988) Vol. 25, No. 2, pp. 131-137. 20 ref.
ISSN: 0300-9858
DT Journal
LA English
ED Entered STN: 1 Nov 1994

Last Updated on STN: 1 Nov 1994
AB Ligated ileal loops of calves inoculated with live and heat-killed M. paratuberculosis were examined by light and electron microscopy. At 5 hours after inoculation, acid-fast bacilli were in subepithelial macrophages, but not in M cells covering domes. At 20 hours, more than 50 acid-fast bacilli per cross section were in subepithelial macrophages in domes. Both living and heat-killed bacilli passed into domes. Addition of anti-M. paratuberculosis bovine serum to the inoculum increased entry of bacteria into domes. Electron microscopy showed intact bacilli with electron-transparent zones (peribacillary spaces) in the supranuclear cytoplasm of M cells at 20 hours. M cells also contained vacuoles, including electron-dense material interpreted as degraded bacilli. Subepithelial and intraepithelial macrophages contained bacilli and degraded bacterial material in phagosomes. These results suggest that calf ileal M cells take up bacilli, and that subepithelial and intraepithelial macrophages secondarily accept bacilli or bacterial debris which are expelled from M cells.
TI Role of M cells and macrophages in the entrance of ***Mycobacterium*** paratuberculosis into domes of ileal Peyer's patches in calves.
AU ***Momotani, E.*** ; Whipple, D. L.; Thiermann, A. B.; Cheville, N. F.
BT mammals; vertebrates; Chordata; animals; young animals;
Mycobacterium ; ***Mycobacteriaceae*** ; Firmicutes; bacteria; prokaryotes
ORGN ***Mycobacterium*** paratuberculosis; cattle

L2 ANSWER 17 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 11
AN 1987:106473 BIOSIS <<LOGINID::20080325>>
DN PREV198783055451; BA83:55451
TI IMMUNOHISTOCHEMICAL DISTRIBUTION OF IMMUNOGLOBULIN AND SECRETORY COMPONENT IN THE ILEUM OF NORMAL AND PARATUBERCULOSIS-INFECTED CATTLE.
AU ***MOMOTANI E*** [Reprint author]; ISHIKAWA Y; YOSHINO T
CS HOKKAIDO BRANCH LABORATORY, NATIONAL INSTITUTE OF ANIMAL HEALTH, HITSUJIGAOKA 4, TOYOHIRA-KU, SAPPORO 004, JAPAN
SO Journal of Comparative Pathology, (1986) Vol. 96, No. 6, pp. 659-670. CODEN: JCVPAR. ISSN: 0021-9975.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 26 Feb 1987
Last Updated on STN: 26 Feb 1987
AB The immunohistochemical distribution of IgA, IgG, IgM and secretory component in the ileum of 10 normal and 21 paratuberculosis-infected cattle was investigated. Semi-quantitative analysis of the number of each class of Ig-containing cells in the lamina propria mucosa of infected ileums showed that IgG and IgM-containing cells and total Ig-containing cells were significantly more numerous than those in the normal ileums. There was no significant difference in the numbers of IgA-containing cells between the two groups of cattle. The distribution of IgA, IgM and SC was basically similar in the two groups. However, IgG-containing cells characteristically accumulated around the granulomas. It was considered that excessive local production of Ig in the intestinal mucosa, along with subsequent formation of immune complex or release of histamine from mast cells, could account for the occurrence of diarrhoea and participate in the pathogenesis of bovine paratuberculosis. A comparison of the local immunological state in paratuberculosis and Crohn's disease was made.
AU ***MOMOTANI E*** [Reprint author]; ISHIKAWA Y; YOSHINO T

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms;
Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia;. . .

L2 ANSWER 18 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 12
AN 1986:281052 BIOSIS <<LOGINID::20080325>>
DN PREV198682024915; BA82:24915
TI IMMUNOHISTOCHEMICAL DISTRIBUTION OF FERRITIN LACTOFERRIN AND TRANSFERRIN IN GRANULOMAS OF BOVINE PARATUBERCULOSIS.
AU ***MOMOTANI E*** [Reprint author]; FURUGOURI K; OBARA Y; MIYATA Y; ISHIKAWA Y; YOSHINO T
CS HAKKAIDO BRANCH LABORATORY, NATIONAL INSTITUTE OF ANIMAL HEALTH, HITSUJIGAOKA, TOYOHIRA-KU, SAPPORO 004, JAPAN
SO Infection and Immunity, (1986) Vol. 52, No. 2, pp. 623-627.
CODEN: INFIBR. ISSN: 0019-9567.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 4 Jul 1986
Last Updated on STN: 4 Jul 1986
AB Granulomatous lesions of bovine paratuberculosis contained ferritin, lactoferrin and a small amount of transferrin, as demonstrated by the immunohistochemical method. Macrophages in the normal bovine ileum did not contain lactoferrin and transferrin; however, ferritin was found in individual macrophages of Peyer's patches. These results may help elucidate the relationship between intracellular growth of ***Mycobacterium*** paratuberculosis and the presence of iron-binding proteins in the granulomas.
AU ***MOMOTANI E*** [Reprint author]; FURUGOURI K; OBARA Y; MIYATA Y; ISHIKAWA Y; YOSHINO T
AB. . . ferritin was found in individual macrophages of Peyer's patches. These results may help elucidate the relationship between intracellular growth of ***Mycobacterium*** paratuberculosis and the presence of iron-binding proteins in the granulomas.
IT Miscellaneous Descriptors
MYCOBACTERIUM -PARATUBERCULOSIS ***MYCOBACTIN*** EXOCHELIN
IRON-BINDING PROTEIN INTRACELLULAR GROWTH ENTERITIS
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms;
Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715
Super Taxa

Artiodactyla; Mammalia;. . .
RN 1400-46-0 (***MYCOBACTIN***)

L2 ANSWER 19 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 13
AN 1985:408087 BIOSIS <<LOGINID::20080325>>
DN PREV198580078079; BA80:78079
TI CASEOUS GRANULOMAS IN BOVINE PARATUBERCULOSIS.
AU ***MOMOTANI E*** [Reprint author]; YOSHINO T
CS HODDAIDO BRANCH LABORATORY, NATIONAL INSTITUTE OF ANIMAL HEALTH, 4 HITSUJIGAOKA, TOYOHIRA-KU, SAPPORO 061-01, JAPAN
SO Japanese Journal of Veterinary Science, (1985) Vol. 47, No. 3, pp. 487-492.
CODEN: NJUZA9. ISSN: 0021-5295.
DT Article
FS BA
LA ENGLISH
AB Caseous granulomas were found in the mesenteric lymph nodes of an Aberdeen-Angus cow, 5 yr old, having paratuberculosis. They were found together with epithelioid cell granulomas, and both of them contained numerous acid-fast bacilli. The intestine showed extensive paratuberculous lesions with numerous acid-fast bacilli. There was no caseation but focal neutrophil infiltration in the intestinal granulomas. ***Mycobacterium*** paratuberculosis was isolated from both the mesenteric lymph nodes and the intestine. No tuberculous bacilli were detected, and tuberculin and Johnin tests were negative.
AU ***MOMOTANI E*** [Reprint author]; YOSHINO T
AB. . . showed extensive paratuberculous lesions with numerous acid-fast bacilli. There was no caseation but focal neutrophil infiltration in the intestinal granulomas. ***Mycobacterium*** paratuberculosis was isolated from both the mesenteric lymph nodes and the intestine. No tuberculous bacilli were detected, and tuberculin and. . .
IT Miscellaneous Descriptors
MYCOBACTERIUM -PARATUBERCULOSIS INTESTINAL PARATUBERCULOUS LESIONS ACID-FAST BACILLI FOCAL NEUTROPHIL INFILTRATION
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia;. . .

L2 ANSWER 20 OF 20 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 14
AN 1985:279500 BIOSIS <<LOGINID::20080325>>
DN PREV198579059496; BA79:59496
TI PATHOLOGICAL CHANGES OF SPONTANEOUS DUAL INFECTION OF TUBERCULOSIS AND PARATUBERCULOSIS IN BEEF CATTLE.
AU ***MOMOTANI E*** [Reprint author]; YOSHINO T
CS HOKKAIDO BRANCH LAB, NATL INST ANIMAL HEALTH, 4 HITSUJIGAOKA, TOYOHIRA-KU, SAPPORO, HOKKAIDO 061-01, JPN
SO Japanese Journal of Veterinary Science, (1984) Vol. 46, No. 5, pp.

625-632.
CODEN: NJUZA9. ISSN: 0021-5295.
DT Article
FS BA
LA ENGLISH
AB Four cases of spontaneous dual infection of tuberculosis and paratuberculosis in beef cattle, first noticed in Japan, were examined pathologically. All of the cattle were from the same limited area of Hokkaido island. Tuberculous lesions were found in 2-9 organs, including the liver, lung, kidney and mesenteric lymph nodes, and granulomas showed the same appearance as in the case of single infection. Paratuberculous lesions characterized by intracellular short acid-fast bacilli were found in the jejunum, ileum, cecum and the draining lymp nodes, but they were not severe. The mesenteric lymph nodes revealed both tuberculous and paratuberculous lesions, and in 2 of the 4 cases both types of granulomas were present in the same sections. In such sections, short acid-fast bacilli were not numerous in granulomas adjacent to tuberculous lesions.
AU ***MOMOTANI E*** [Reprint author]; YOSHINO T
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Taxa Notes
Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Bovidae 85715
Super Taxa
Artiodactyla; Mammalia;. . .

=> e mori yasuyuki/au
E1 58 MORI YASUYOSHI/AU
E2 1 MORI YASUYOSMI/AU
E3 175 --> MORI YASUYUKI/AU
E4 1 MORI YASUZANE/AU
E5 12 MORI YAYOI/AU
E6 233 MORI YO/AU
E7 1 MORI YO ICHI/AU
E8 1 MORI YOHIRO/AU
E9 4 MORI YOHKO/AU
E10 3 MORI YOHTA/AU
E11 311 MORI YOICHI/AU
E12 56 MORI YOICHIRO/AU

=> s e3 and mycobact?
L3 33 "MORI YASUYUKI"/AU AND MYCOBACT?

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 15 DUP REM L3 (18 DUPLICATES REMOVED)

=> d bib ab kwic 1-
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L4 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:428046 CAPLUS <<LOGINID::20080325>>

DN 146:416306
TI Primer sets for detection of expression level of urocortin for evaluation of progressing of johne's disease in livestock
IN Momotani, Eiichi; ***Mori, Yasuyuki*** ; Wang, Hong Yu
PA National Agriculture Bio-Oriented Research Organization, Japan
SO Jpn. Kokai Tokkyo Koho, 15pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2007097490	A	20070419	JP 2005-291868	20051005
PRAI JP 2005-291868		20051005		

AB This invention provides primer sets for detection of expression level of urocortin in livestock blood sample by realtime-PCR. The cDNA sequence of Bos taurus urocortin were disclosed. The invention also provides method for prepn. of std. curve for real-time PCR by detecting the expression level of urocortin gene in Bos taurus cells immunized with antigen from ***Mycobacterium*** paratuberculosis. The method provided in this invention can be used for evaluation of progressing of johne's disease in livestock in early stage of infection.
IN Momotani, Eiichi; ***Mori, Yasuyuki*** ; Wang, Hong Yu
AB . . . curve for real-time PCR by detecting the expression level of urocortin gene in Bos taurus cells immunized with antigen from ***Mycobacterium*** paratuberculosis. The method provided in this invention can be used for evaluation of progressing of johne's disease in livestock in. . .
IT ***Mycobacterium*** avium paratuberculosis
(infection of; primer sets for detection of expression level of urocortin for evaluation of progressing of johne's disease in livestock)

L4 ANSWER 2 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 1
AN 2007:589654 BIOSIS <<LOGINID::20080325>>
DN PREV200700590889
TI Corticotropin-releasing hormone and urocortin expression in peripheral blood cells from experimentally infected cattle with ***Mycobacterium*** avium subsp paratuberculosis.
AU Wang, Hongyu; Aodon-geril; Shu, Yujing; Momotani, Yuriko; Wang, Xiaofei; ***Mori, Yasuyuki*** ; Momotani, Eiichi [Reprint Author]
CS Natl Inst Anim Hlth, Res Team Paratuberculosis, 3-1-5 Kan-nondai, Tsukuba, Ibaraki 3050856, Japan
momotani@affrc.go.jp
SO Microbes and Infection, (JUL 2007) Vol. 9, No. 9, pp. 1061-1069.
ISSN: 1286-4579.
DT Article
LA English
ED Entered STN: 21 Nov 2007
Last Updated on STN: 21 Nov 2007
AB Urocortin (UCN) is a new neuropeptide of the corticotrophin-releasing hormone (CRH) family which plays an important role in immune responses. ***Mycobacterium*** avium subspecies paratuberculosis (Map) is the etiological agent of paratuberculosis (Johne's disease). The role of UCN or CRH in the pathogenesis of Map-infection is unknown. In the present study, we first cloned the bovine UCN gene and demonstrated the profile of

UCN or CRH expression in peripheral blood cells from Map-infected cattle and uninfected controls by real-time reverse transcription-polymerase chain reaction (RT-PCR) and ELISA analysis. These data are the first observations of the characteristic kinetics of these neuropeptides in Map-infection. UCN or CRH expression in non-stimulated blood samples from infected cattle was higher than that in similarly treated samples from uninfected controls; however, exposure to Map lysate and live Map resulted in down-regulated expression of UCN in infected cattle compared to their counterparts from uninfected controls. These results have provided a direction in understanding the pathogenesis of paratuberculosis and improving diagnostic methods for Map-infection. (C) 2007 Elsevier Masson SAS. All rights reserved.

TI Corticotropin-releasing hormone and urocortin expression in peripheral blood cells from experimentally infected cattle with ***Mycobacterium*** avium subsp paratuberculosis.

AU Wang, Hongyu; Aodon-geril; Shu, Yujing; Momotani, Yuriko; Wang, Xiaofei; ***Mori, Yasuyuki*** ; Momotani, Eiichi [Reprint Author]

AB. . . Urocortin (UCN) is a new neuropeptide of the corticotrophin-releasing hormone (CRH) family which plays an important role in immune responses. ***Mycobacterium*** avium subspecies paratuberculosis (Map) is the etiological agent of paratuberculosis (Johne's disease). The role of UCN or CRH in the. . .

ORGN . . .
Chordata; Animalia
Organism Name
bovine (common): host
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 3 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 2

AN 2008:30137 BIOSIS <<LOGINID::20080325>>

DN PREV200800031655

TI Detection of ***Mycobacterium*** avium subsp paratuberculosis in ovine faeces by direct quantitative PCR has similar or greater sensitivity compared to radiometric culture.

AU Kawaji, Satoko; Taylor, Deborah L.; ***Mori, Yasuyuki*** ; Whittington, Richard J. [Reprint Author]

CS Univ Sydney, Fac Vet Sci, 425 Werombi Rd, Camden, NSW 2570, Australia richardw@camden.usyd.edu.au

SO Veterinary Microbiology, (NOV 15 2007) Vol. 125, No. 1-2, pp. 36-48. CODEN: VMICDQ. ISSN: 0378-1135.

DT Article

LA English

ED Entered STN: 19 Dec 2007
Last Updated on STN: 19 Dec 2007

AB The aims of this study were to develop a new real-time quantitative PCR

(QPCR) assay based on IS900 for detection and quantification of ***Mycobacterium*** avium subsp. paratuberculosis (MAP) DNA in faeces, and to use this to detect infected sheep. Both the C and S strains of MAP were detected by the QPCR assay, and no cross reactions were detected with 51 other species of ***mycobacteria*** including 10 which contained IS900-like sequences. One copy of IS900 fragment cloned into plasmid pCR2.1 and 1 fg of MAP genomic DNA were consistently detected, while in spiked faecal samples the detection limit was 10 viable MAP per gram of ovine faeces. A total of 506 individual ovine faecal samples and 27 pooled ovine faecal samples with known culture results were tested. The QPCR assay detected 68 of 69 BACTEC culture positive individual faeces and there was a strong relation between time to detection in culture and DNA quantity measured by QPCR (r = -0.70). In pooled faecal samples, QPCR also agreed with culture (kappa = 0.59). MAP DNA was detected from some culture negative faecal samples from sheep exposed to MAP, suggesting that the QPCR has very high analytical sensitivity for MAP in faecal samples and detects non-viable MAP in ovine faeces. None of the faecal samples from 176 sheep that were not exposed to MAP were positive in QPCR. This is the first report of a direct faecal QPCR assay that has similar sensitivity to a gold standard radiometric culture assay. (C) 2007 Elsevier B.V. All rights reserved.

TI Detection of ***Mycobacterium*** avium subsp paratuberculosis in ovine faeces by direct quantitative PCR has similar or greater sensitivity compared to radiometric culture.

AU Kawaji, Satoko; Taylor, Deborah L.; ***Mori, Yasuyuki*** ; Whittington, Richard J. [Reprint Author]

AB. . . this study were to develop a new real-time quantitative PCR (QPCR) assay based on IS900 for detection and quantification of ***Mycobacterium*** avium subsp. paratuberculosis (MAP) DNA in faeces, and to use this to detect infected sheep. Both the C and S. . . strains of MAP were detected by the QPCR assay, and no cross reactions were detected with 51 other species of ***mycobacteria*** including 10 which contained IS900-like sequences. One copy of IS900 fragment cloned into plasmid pCR2.1 and 1 fg of MAP. . .

ORGN . . .
Chordata; Animalia
Organism Name
ovine (common): host
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 4 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 3

AN 2006:532033 BIOSIS <<LOGINID::20080325>>

DN PREV200600524060

TI A highly sensitive and subspecies-specific surface antigen enzyme-linked immunosorbent assay for diagnosis of Johne's disease.

AU Eda, Shigetoshi; Bannantine, John P.; Waters, W. R.; ***Mori,*** ***Yasuyuki*** ; Whitlock, Robert H.; Scott, M. Cathy; Speer, C. A. [Reprint Author]
CS Univ Tennessee, Ctr Wildlife Hlth, Dept Forestry Wildlife and Fisheries, POB 1071, Knoxville, TN 37901 USA
caspeer@utk.edu
SO Clinical and Vaccine Immunology, (AUG 2006) Vol. 13, No. 8, pp. 837-844. ISSN: 1556-6811.
DT Article
LA English
ED Entered STN: 12 Oct 2006
Last Updated on STN: 12 Oct 2006
AB Johne's disease (JD), or paratuberculosis, caused by ***Mycobacterium*** avium subsp. paratuberculosis, is one of the most widespread and economically important diseases of livestock and wild ruminants worldwide. Control of JD could be accomplished by diagnosis and good animal husbandry, but this is currently not feasible because commercially available diagnostic tests have low sensitivity levels and are incapable of diagnosing prepatent infections. In this study, a highly sensitive and subspecies-specific enzyme-linked immunosorbent assay was developed for the diagnosis of JD by using antigens extracted from the surface of M. avium subsp. paratuberculosis. Nine different chemicals and various intervals of agitation by vortex were evaluated for their ability to extract the surface antigens. Various quantities of surface antigens per well in a 96-well microtiter plate were also tested. The greatest differences in distinguishing between JD-positive and JD-negative serum samples by ethanol vortex enzyme-linked immunosorbent assay (EVELISA) were obtained with surface antigens dislodged from 50 mu g/well of bacilli treated with 80% ethanol followed by a 30-second interval of agitation by vortex. The diagnostic specificity and sensitivity of the EVELISA were 97.4% and 100%, respectively. EVELISA plates that had been vacuum-sealed and then tested 7 weeks later (the longest interval tested) had diagnostic specificity and sensitivity rates of 96.9 and 100%, respectively. In a comparative study involving serum samples from 64 fecal culture-positive cattle, the EVELISA identified 96.6% of the low-level fecal shedders and 100% of the midlevel and high-level shedders, whereas the Biocor ELISA detected 13.7% of the low-level shedders, 25% of the mid-level shedders, and 96.2% of the high-level shedders. Thus, the EVELISA was substantially superior to the Biocor ELISA, especially in detecting low-level and midlevel shedders. The EVELISA may form the basis for a highly sensitive and subspecies-specific test for the diagnosis of JD.
AU Eda, Shigetoshi; Bannantine, John P.; Waters, W. R.; ***Mori,*** ***Yasuyuki*** ; Whitlock, Robert H.; Scott, M. Cathy; Speer, C. A. [Reprint Author]
AB Johne's disease (JD), or paratuberculosis, caused by ***Mycobacterium*** avium subsp. paratuberculosis, is one of the most widespread and economically important diseases of livestock and wild ruminants worldwide. Control. . .
ORGN . . .
Organism Name
bovine (common): host, cattle, female
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier

Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 5 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 4
AN 2006:467815 BIOSIS <<LOGINID::20080325>>
DN PREV200600465331
TI A novel enzyme-linked immunosorbent assay for diagnosis of ***Mycobacterium*** avium subsp paratuberculosis infections (Johne's disease) in cattle.
AU Speer, C. A. [Reprint Author]; Scott, M. Cathy; Bannantine, John P.; Waters, W. Ray; ***Mori, Yasuyuki*** ; Whitlock, Robert H.; Eda, Shigetoshi
CS Univ Tennessee, Dept Forestry Wildlife and Fisheries, Ctr Wildlife Hlth, POB 1071, Knoxville, TN 37901 USA
caspeer@utk.edu
SO Clinical and Vaccine Immunology, (MAY 2006) Vol. 13, No. 5, pp. 535-540. ISSN: 1556-6811.
DT Article
LA English
ED Entered STN: 20 Sep 2006
Last Updated on STN: 20 Sep 2006
AB Enzyme-linked immunosorbent assays (ELISAs) for the diagnosis of Johne's disease (JD), caused by ***Mycobacterium*** avium subsp. paratuberculosis, were developed using whole bacilli treated with formaldehyde (called WELISA) or surface antigens obtained by treatment of H. avium subsp. paratuberculosis bacilli with formaldehyde and then brief sonication (called SELISA). ELISA plates were coated with either whole bacilli or sonicated antigens and tested for reactivity against serum obtained from JD-positive and JD-negative cattle or from calves experimentally inoculated with M. avium subsp. paratuberculosis, ***Mycobacterium*** avium subsp. avium, or ***Mycobacterium*** bovis. Because the initial results obtained from the WELISA and SELISA were similar, most of the subsequent experiments reported herein were performed using the SELISA method. To optimize the SELISA test, various concentrations (3.7 to 37%) of formaldehyde and intervals of sonication (2 to 300 s) were tested. With an increase in formaldehyde concentration and a decreased interval of sonication, there was a concomitant decrease in nonspecific binding by the SELISA. SELISAs prepared by treating M. avium subsp. paratuberculosis with 37% formaldehyde and then a 2-s burst of sonication produced the greatest difference (7X) between M. avium subsp. paratuberculosis-negative and M. avium subsp. paratuberculosis-positive serum samples. The diagnostic sensitivity and specificity for JD by the SELISA were greater than 95%. The SELISA showed subspecies-specific detection of M. avium subsp. paratuberculosis infections in calves experimentally inoculated with M. avium subsp. paratuberculosis or other ***mycobacteria*** . Based on diagnostic sensitivity and specificity, the SELISA appears superior to the commercial ELISAs routinely used for the diagnosis of JD.
TI A novel enzyme-linked immunosorbent assay for diagnosis of ***Mycobacterium*** avium subsp paratuberculosis infections (Johne's

disease) in cattle.
AU Speer, C. A. [Reprint Author]; Scott, M. Cathy; Bannantine, John P.; Waters, W. Ray; ***Mori, Yasuyuki*** ; Whitlock, Robert H.; Eda, Shigetoshi
AB Enzyme-linked immunosorbent assays (ELISAs) for the diagnosis of Johne's disease (JD), caused by ***Mycobacterium*** avium subsp. paratuberculosis, were developed using whole bacilli treated with formaldehyde (called WELISA) or surface antigens obtained by treatment of. . . for reactivity against serum obtained from JD-positive and JD-negative cattle or from calves experimentally inoculated with M. avium subsp. paratuberculosis, ***Mycobacterium*** avium subsp. avium, or ***Mycobacterium*** bovis. Because the initial results obtained from the WELISA and SELISA were similar, most of the subsequent experiments reported herein. . . showed subspecies-specific detection of M. avium subsp. paratuberculosis infections in calves experimentally inoculated with M. avium subsp. paratuberculosis or other ***mycobacteria*** . Based on diagnostic sensitivity and specificity, the SELISA appears superior to the commercial ELISAs routinely used for the diagnosis of. . .
IT Major Concepts
Infection; Methods and Techniques
IT Diseases
Mycobacterium avium tuberculosis infection: bacterial disease, infectious disease, diagnosis, Johne's disease
IT Chemicals & Biochemicals
formaldehyde; surface antigen
ORGN . . .
Chordata; Animalia
Organism Name
cattle (common): host
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium bovis (species)
Mycobacterium avium paratuberculosis (subspecies): pathogen
Mycobacterium avium avium (subspecies)
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:283672 CAPLUS <<LOGINID::20080325>>
DN 142:334896
TI Method for diagnosing johne's disease
IN Momotani, Eiichi; ***Mori, Yasuyuki*** ; Hikono, Hirokazu; Buza, Joram Josephat
PA Incorporated Administrative Agency National Agriculture and Bio-Oriented Research Organization, Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005029079	A1	20050331	WO 2003-JP11845	20030917
	W: AU, JP, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	AU 2003272880	A1	20050411	AU 2003-272880	20030917
	US 2008038758	A1	20080214	US 2007-572514	20070426
PRAI	WO 2003-JP11845	A	20030917		

AB A method for diagnosing johne's disease is provided, with which an animal infected with ***Mycobacterium*** paratuberculosis (Johne's) can be diagnosed at a high sensitivity in the inapparent infection stage before the specific antibody level begins to increase, and a large no. of specimens can be treated. The method is characterized in that it comprises collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** paratuberculosis antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood. The method is also characterized in that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA method. Also provided is a method for diagnosing ***mycobacteriosis*** , which is characterized by comprising collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IN Momotani, Eiichi; ***Mori, Yasuyuki*** ; Hikono, Hirokazu; Buza, Joram Josephat

AB A method for diagnosing johne's disease is provided, with which an animal infected with ***Mycobacterium*** paratuberculosis (Johne's) can be diagnosed at a high sensitivity in the inapparent infection stage before the specific antibody level begins. . . is characterized in that it comprises collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** paratuberculosis antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood. The. . . that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA method. Also provided is a method for diagnosing ***mycobacteriosis*** , which is characterized by comprising collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood.

IT Animals
Blood analysis
Diagnosis
Mycobacterium avium paratuberculosis
(method for diagnosing johne's disease by measuring blood IFN.gamma. by ELISA)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:315731 CAPLUS <<LOGINID::20080325>>
DN 142:390942
TI Protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis
IN ***Mori, Yasuyuki*** ; Nagata, Reiko; Yoshihara, Kazuhiro; Sota, Yoshihiro; Yokomizo, Yuichi

PA National Institute of Agro-Environmental Sciences, Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005095101	A	20050414	JP 2003-334977	20030926
JP 3864230	B2	20061227		
PRAI JP 2003-334977		20030926		

AB The sequences of antigens able to induce interferon .gamma. are isolated from cow PBMC (peripheral blood mononuclear cell) infected with ***Mycobacterium*** johnei. The induction of interferon .gamma. by ***Mycobacterium*** johnei is useful in diagnosis of infection of ***Mycobacterium*** johnei by detection of interferon .gamma. in the supernatant of infected cells.
TI Protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis
IN ***Mori, Yasuyuki*** ; Nagata, Reiko; Yoshihara, Kazuhiro; Sota, Yoshihiro; Yokomizo, Yuichi
AB The sequences of antigens able to induce interferon .gamma. are isolated from cow PBMC (peripheral blood mononuclear cell) infected with ***Mycobacterium*** johnei. The induction of interferon .gamma. by ***Mycobacterium*** johnei is useful in diagnosis of infection of ***Mycobacterium*** johnei by detection of interferon .gamma. in the supernatant of infected cells.
ST ***Mycobacterium*** antigen sequence interferon gamma induction
IT Mononuclear cell (leukocyte)
(PBMC; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT Animal cell
(diagnostic sample from; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT Gene, microbial
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(encoding antigen; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT Diagnosis
(mol.; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT Infection
(of ***Mycobacterium*** johnei, diagnosis of; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT Bos taurus
DNA sequences
Mycobacterium avium paratuberculosis
Protein sequences
(protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT Antigens
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(protein and DNA sequence of ***Mycobacterium*** johnei antigens

able to induce interferon and uses in diagnosis)
IT Interferons
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(.gamma., detection of, in cell supernatant; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT 849989-44-2 849989-47-5
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(amino acid sequence; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)
IT 849989-45-3 849989-46-4
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(nucleotide sequence; protein and DNA sequence of ***Mycobacterium*** johnei antigens able to induce interferon and uses in diagnosis)

L4 ANSWER 8 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 5
AN 2005:337763 BIOSIS <<LOGINID::20080325>>
DN PREV200510123867
TI Expression cloning of gamma interferon-inducing antigens of ***Mycobacterium*** avium subsp paratuberculosis.
AU Nagata, Reiko [Reprint Author]; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Yokomizo, Yuichi; ***Mori, Yasuyuki***
CS Natl Inst Anim Hlth, Immune Syst Sect, Dept Immunol, 3-1-5 Kannondai, Tsukuba, Ibaraki 3050856, Japan
kikuma@affrc.go.jp
SO Infection and Immunity, (JUN 2005) Vol. 73, No. 6, pp. 3778-3782.
CODEN: INFIBR. ISSN: 0019-9567.
DT Article
LA English
OS GenBank-AX094821; EMBL-AX094821; DDJB-AX094821; GenBank-U18263; EMBL-U18263; DDJB-U18263
ED Entered STN: 31 Aug 2005
Last Updated on STN: 31 Aug 2005
AB Three recombinant proteins, Map10, Map39, and Map41, produced based on nucleotide sequences obtained from the screening of ***Mycobacterium*** avium subsp. paratuberculosis genomic library expressed in Escherichia coli significantly elicited gamma interferon production in peripheral blood mononuclear cells from infected cattle. Two of these proteins were members of the PPE protein family.
TI Expression cloning of gamma interferon-inducing antigens of ***Mycobacterium*** avium subsp paratuberculosis.
AU Nagata, Reiko [Reprint Author]; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Yokomizo, Yuichi; ***Mori, Yasuyuki***
AB Three recombinant proteins, Map10, Map39, and Map41, produced based on nucleotide sequences obtained from the screening of ***Mycobacterium*** avium subsp. paratuberculosis genomic library expressed in Escherichia coli significantly elicited gamma interferon production in peripheral blood mononuclear cells from. . .
ORGN . . .
Anaerobic Gram-Negative Rods; Eubacteria; Bacteria; Microorganisms
Organism Name
Escherichia coli (species): expression system
Taxa Notes

Bacteria, Eubacteria, Microorganisms
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:175700 CAPLUS <<LOGINID::20080325>>
DN 140:230513
TI Primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease
IN Kageyama, Soichi; Sawai, Takeshi; Hinosawa, Masaki; Onoe, Sadao; Watanabe, Keiko; ***Mori, Yasuyuki*** ; Yoshihara, Kazuhiro; Muneta, Yoshihiro; Yokomizo, Yuichi
PA Hokkaido Prefecture, Japan; Eiken Chemical Co., Ltd.; Nogyo Gijutsu Kenkyu Kiko
SO Jpn. Kokai Tokkyo Koho, 34 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004065244	A	20040304	JP 2003-159573	20030604
PRAI JP 2002-168696	A	20020610		

AB This invention provides primer sets for detection of ***Mycobacterium*** avium Paratuberculosis. The primers were used for amplification of ***Mycobacterium*** insertion sequence IS900. The method of detection of ***Mycobacterium*** can be used for diagnosis of Johne's disease.
TI Primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease
IN Kageyama, Soichi; Sawai, Takeshi; Hinosawa, Masaki; Onoe, Sadao; Watanabe, Keiko; ***Mori, Yasuyuki*** ; Yoshihara, Kazuhiro; Muneta, Yoshihiro; Yokomizo, Yuichi
AB This invention provides primer sets for detection of ***Mycobacterium*** avium Paratuberculosis. The primers were used for amplification of ***Mycobacterium*** insertion sequence IS900. The method of detection of ***Mycobacterium*** can be used for diagnosis of Johne's disease.
ST primer set detection ***Mycobacterium*** diagnosis Johne disease
IT Insertion sequence
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(IS900, amplification of; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)
IT Genetic methods
(LAMP, for detection of ***Mycobacterium*** ; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)
IT ***Mycobacterium*** avium paratuberculosis
(detection of; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)

IT Genetic methods
(for detection of ***Mycobacterium*** ; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)
IT Primers (nucleic acid)
RL: BUU (Biological use, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(for detection of ***Mycobacterium*** ; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)
IT Diagnosis
(mol., of johne's diseases; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)
IT Infection
(paratuberculosis, diagnosis of; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)
IT 668513-71-1 668513-72-2 668513-73-3 668513-74-4 668513-75-5
668513-76-6 668513-77-7 668513-78-8 668513-79-9 668513-80-2
668513-81-3 668513-82-4 668513-83-5 668513-84-6 668513-85-7
668513-86-8 668513-87-9 668513-88-0 668513-89-1 668513-90-4
668513-91-5 668513-92-6
RL: BUU (Biological use, unclassified); DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)
IT 668757-91-3 668757-92-4 668757-93-5 668757-94-6 668757-95-7
668757-96-8 668757-97-9 668757-98-0 668757-99-1 668758-00-7
668758-01-8 668758-02-9
RL: PRP (Properties)
(unclaimed nucleotide sequence; primer sets for detection of ***Mycobacterium*** avium and their uses for diagnosis of Johne's disease)

L4 ANSWER 10 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 6
AN 2004:438665 BIOSIS <<LOGINID::20080325>>
DN PREV200400437489
TI Neutralization of interleukin-10 significantly enhances gamma interferon expression in peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.
AU Buza, Jorarn J.; Hikono, Hirokazu; ***Mori, Yasuyuki*** ; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; Momotani, Eiichi [Reprint Author]
CS ParaTB and Inflammatory Bowel Dis Res Team, NIAH, 3-1-5 Kannondai, Tsukuba, Ibaraki, 3050856, Japan
momotani@affrc.go.jp
SO Infection and Immunity, (April 2004) Vol. 72, No. 4, pp. 2425-2428. print. ISSN: 0019-9567 (ISSN print).
DT Article
LA English
ED Entered STN: 17 Nov 2004
Last Updated on STN: 17 Nov 2004
AB Monoclonal antibody neutralization of interleukin-10 (IL-10) increased

Johnin purified protein derivative-induced whole-blood gamma interferon (IFN-gamma) secretion 23-fold and also increased IFN-gamma secretion ninefold following in vitro ***Mycobacterium*** avium subsp. paratuberculosis infection of peripheral blood mononuclear cells. These results demonstrate the suppressive effect of IL-10 on immune responses to M. avium subsp. paratuberculosis infection in cattle.

TI . . interleukin-10 significantly enhances gamma interferon expression in peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.

AU Buza, Jorarn J.; Hikono, Hirokazu; ***Mori, Yasuyuki*** ; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; Momotani, Eiichi [Reprint Author]

AB. . . increased Johnin purified protein derivative-induced whole-blood gamma interferon (IFN-gamma) secretion 23-fold and also increased IFN-gamma secretion ninefold following in vitro ***Mycobacterium*** avium subsp. paratuberculosis infection of peripheral blood mononuclear cells. These results demonstrate the suppressive effect of IL-10 on immune responses. . .

ORGN . . .
Animalia
Organism Name
cattle (common): immune responses
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies)
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 11 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 2005:45686 BIOSIS <<LOGINID::20080325>>

DN PREV200500044914

TI Generation of multinucleated giant cells in vitro from bovine monocytes and macrophages.

AU Yoshihara, Kazuhiro [Reprint Author]; Nagata, Reiko; Muneta, Yoshihiro; Inumaru, Shigeki; Yokomizo, Yuichi; ***Mori, Yasuyuki***

CS Natl Inst Anim Hlth, 3-1-5 Kannondai, Tsukuba, Ibaraki, 3050856, Japan

SO Journal of Veterinary Medical Science, (September 2004) Vol. 66, No. 9, pp. 1065-1069. print.
ISSN: 0916-7250 (ISSN print).

DT Article

LA English

ED Entered STN: 26 Jan 2005
Last Updated on STN: 26 Jan 2005

AB The generation of multinucleated giant cells (MGC) from cells of the bovine monocyte-macrophage lineage was investigated. Freshly isolated monocytes were incubated with the conditioned medium (CM) of peripheral blood mononuclear cell cultures treated with Concanavalin A for 1-4 days (CM1 to CM4). Only CM1 generated MGC despite similar concentrations of

IFNgamma in all CMs. Nevertheless, MGC formation from monocytes was enhanced by adding either macrophage colony-stimulating factor (M-CSF) or granulocyte-macrophage colony-stimulating factor (GM-CSF), MGC formations from macrophages were observed only when macrophages were cultured with GM-CSF plus CM. These results indicate that several mechanisms to generate MGC from bovine monocytes-macrophage lineage cells exist, and that GM-CSF is a major mediator of MGC formation in cattle.

AU Yoshihara, Kazuhiro [Reprint Author]; Nagata, Reiko; Muneta, Yoshihiro; Inumaru, Shigeki; Yokomizo, Yuichi; ***Mori, Yasuyuki***

ORGN . . .
Chordata; Animalia
Organism Name
cattle (common): host
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:885718 CAPLUS <<LOGINID::20080325>>
DN 141:363746
TI Development of early-stage diagnostic method for Johne disease by using anti-IL-10 antibody
AU Momotani, Eiichi; ***Mori, Yasuyuki***
CS Natl. Agric. Bio-oriented Res. Org., Natl. Inst. Animal Health, Tsukuba, 305-0856, Japan
SO BRAIN Techno News (2004), 105, 18-24
CODEN: BTEEEC; ISSN: 1345-5958
PB Nogyo, Seibutsukei Tokutei Sangyo Gijutsu Kenkyu Kiko, Seibutsukei Tokutei Sangyo Gijutsu Kenkyu Shien Senta
DT Journal; General Review
LA Japanese
AB A review on early-stage diagnosis of Johne's disease (paratuberculosis) in cattle by modified interferon .gamma. ELISA assay using IL-10 neutralizing antibody, and its effectiveness.
AU Momotani, Eiichi; ***Mori, Yasuyuki***
IT Bos taurus
Mycobacterium avium paratuberculosis
(early-stage diagnosis method for Johne's disease using anti-IL-10 antibody)

L4 ANSWER 13 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 7
AN 2004:64047 BIOSIS <<LOGINID::20080325>>
DN PREV200400065534
TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral blood of experimentally infected cattle.

AU Buza, Joram J.; ***Mori, Yasuyuki*** ; Bari, Abusaleh M.; Hikono, Hirokazu; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; Momotani, Eiichi [Reprint Author]
CS Paratuberculosis and Inflammatory Bowel Disease Research Team, NIAH, 3-1-5 Kan-nondai, Tsukuba, 305-0856, Japan momotani@affrc.go.jp
SO Infection and Immunity, (December 2003) Vol. 71, No. 12, pp. 7223-7227. print.
ISSN: 0019-9567 (ISSN print).
DT Article
LA English
ED Entered STN: 28 Jan 2004
Last Updated on STN: 28 Jan 2004
AB Blood from cattle with subclinical ***Mycobacterium*** avium subsp. paratuberculosis infection was stimulated with M. avium subsp. paratuberculosis antigens, and expression of interleukin-1beta (IL-1beta), tumor necrosis factor alpha (TNF-alpha), RANTES, monocyte chemoattractant protein 1 (MCP-1), and IL-8 was measured. Expression of TNF-alpha, RANTES, and MCP-1 was lower in infected than in uninfected cattle. The reduced response may weaken protective immunity and perpetuate infection.
TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral. . .
AU Buza, Joram J.; ***Mori, Yasuyuki*** ; Bari, Abusaleh M.; Hikono, Hirokazu; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; Momotani, Eiichi [Reprint Author]
AB Blood from cattle with subclinical ***Mycobacterium*** avium subsp. paratuberculosis infection was stimulated with M. avium subsp. paratuberculosis antigens, and expression of interleukin-1beta (IL-1beta), tumor necrosis factor. . .
ORGN . . .
Animalia
Organism Name
cattle (common): host, breed-Holstein
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:399194 CAPLUS <<LOGINID::20080325>>
DN 140:39839
TI Studies on diagnostic methods for bovine paratuberculosis
AU ***Mori, Yasuyuki*** ; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; Momotani, Eiichi
CS Immune System Section, Department of Immunology, National Institute of Animal Health, Tsukuba, 305-0856, Japan
SO Dobutsu Eisei Kenkyusho Kenkyu Hokoku (2003), Volume Date 2002, 109, 33-42
CODEN: DEKKC9; ISSN: 1347-2542

PB Nogyo Gijutsu Kenkyu Kiko Dobutsu Eisei Kenkyusho
DT Journal
LA Japanese
AB Current diagnostic tests for paratuberculosis principally rest on serol. assay, bacterial culture and the johnin skin test. However, diagnostic tests that are both sensitive and specific for detecting all subclinically affected animals have not yet been found. Therefore, a no. of studies have been conducted in order to find rapid and accurate diagnostic methods for paratuberculosis. As a result, the following have been found. (1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in fecal samples. (2) In the interferon gamma (IFN-.gamma.) assay using johnin purified protein deriv. (J-PPD), bovine tuberculin PPD and Con A (Con A), IFN-.gamma. responses against J-PPD were the highest in affected animals. On the contrary those of Con A were the highest in healthy animals. Interpretation of the IFN-.gamma. assay by the higher IFN-.gamma. responses against J-PPD than those of Con A is preferable as one of the diagnostic criteria. (3) Monoclonal antibody (711-1-1) which recognizes the lipoarabinomannan antigen of M. avium subsp. paratuberculosis did not react with M. avium subsp. avium, and showed potential usefulness in the serol. tests. (4) A recombinant alkyl hydroperoxide reductase C of M. avium subsp. paratuberculosis has been prepd. and successfully applied to induce IFN-.gamma. from peripheral blood mononuclear cells of animals infected with M. avium subsp. paratuberculosis. (5) In the course of study on the role of cytokines, monocyte chemoattractant protein-1 seems to be involved in the pathogenesis of paratuberculosis.
AU ***Mori, Yasuyuki*** ; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; Momotani, Eiichi
AB . . . following have been found. (1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in fecal samples. (2) In the interferon gamma (IFN-.gamma.) assay using johnin purified protein deriv. (J-PPD), bovine. . .
ST cattle ***Mycobacterium*** paratuberculosis infection surface antigen IFN induction test; alkyl hydroperoxide reductase antigen cattle IFN induction ***Mycobacterium*** ; reverse transcription PCR monocyte chemoattractant protein mRNA assay
IT Bos taurus
Infection
Mycobacterium avium paratuberculosis
(studies on diagnostic methods for bovine paratuberculosis)

L4 ANSWER 15 OF 15 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 2003:329566 BIOSIS <<LOGINID::20080325>>
DN PREV200300329566
TI Studies on the diagnostic methods for bovine paratuberculosis.
AU ***Mori, Yasuyuki*** [Reprint Author]; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; Momotani, Eiichi
CS Immune System Section, Department of Immunology, National Institute of Animal Health, 3-1-5 Kannondai, Tsukuba, Ibaraki, 305-0856, Japan yamori@affrc.go.jp
SO Bulletin of the National Institute of Animal Health, (2002) No. 109, pp. 33-42. print.
ISSN: 1347-2542 (ISSN print).

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DT   Article
LA   Japanese
ED   Entered STN: 16 Jul 2003
     Last Updated on STN: 16 Jul 2003
AB   Current diagnostic tests for paratuberculosis principally rest on
     serological assay, bacterial culture and the johnin skin test.  However,
     diagnostic tests that are both sensitive and specific for detecting all
     subclinically affected animals have not yet been found.  Therefore, a
     number of studies have been conducted in order to find rapid and accurate
     diagnostic methods for paratuberculosis.  As a result, the following have
     been found; 1) PCR test with internal control DNA is accurate, sensitive
     and rapid for the detection of   ***Mycobacterium***   avium subsp.
     paratuberculosis in faecal samples. 2) In the interferon gamma (IFN-gamma)
     assay using johnin purified protein derivative (J-PPD), bovine tuberculin
     PPD and concanavalin A (Con A), IFN-gamma responses against J-PPD were the
     highest in affected animals.  On the contrary those of Con A were the
     highest in healthy animals.  Interpretation of the IFN-gamma assay by the
     higher IFN-gamma responses against J-PPD than those of Con A is preferable
     as one of the diagnostic criteria. 3) Monoclonal antibody (711-1-1) which
     recognizes the lipoarabinomannan antigen of M. avium subsp.
     paratuberculosis did not react with M. avium subsp. avium, and showed
     potential usefulness in the serological tests. 4) A recombinant alkyl
     hydroperoxide reductase C of M. avium subsp. paratuberculosis has been
     prepared and successfully applied to induce IFN-gamma from peripheral
     blood mononuclear cells of animals infected with M. avium subsp.
     paratuberculosis. 5) In the course of study on the role of cytokines,
     monocyte chemoattractant protein-1 seems to be involved in the
     pathogenesis of paratuberculosis.
AU     ***Mori, Yasuyuki***   [Reprint Author]; Kikuma, Reiko; Muneta,
     Yoshihiro; Yoshihara, Kazuhiro; Hikono, Hirokazu; Momotani, Eiichi
AB.  .  .  following have been found; 1) PCR test with internal control DNA is
     accurate, sensitive and rapid for the detection of   ***Mycobacterium***
     avium subsp. paratuberculosis in faecal samples. 2) In the interferon
     gamma (IFN-gamma) assay using johnin purified protein derivative (J-PPD),
     bovine.  .  .
ORGN .  .  .
        Chordata; Animalia
     Organism Name
        bovine (common): host
     Taxa Notes
        Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates,
        Nonhuman Mammals, Vertebrates
ORGN Classifier
           ***Mycobacteriaceae***     08881
     Super Taxa
           ***Mycobacteria***  ; Actinomycetes and Related Organisms;
        Eubacteria; Bacteria; Microorganisms
     Organism Name
           ***Mycobacterium***   avium paratuberculosis (subspecies): pathogen,
        strain-ATCC 19698, strain-Kag-1
     Taxa Notes
        Bacteria, Eubacteria, Microorganisms


=> e hikono hirokazu/au
E1          1     HIKONO ATSUSHI/AU
E2         26     HIKONO H/AU
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E3          39 --> HIKONO HIROKAZU/AU
E4           2     HIKONO KOICHI/AU
E5           1     HIKONO M/AU
E6           1     HIKONO MASAHARU/AU
E7           1     HIKONO MASAJI/AU
E8           5     HIKONO TAKIO/AU
E9           1     HIKONOV V A/AU
E10         21     HIKOSAKA A/AU
E11          7     HIKOSAKA AIZO/AU
E12         14     HIKOSAKA AKIHIDE/AU

=> s e2-e3 and mycobact?
L5          13 ("HIKONO H"/AU OR "HIKONO HIROKAZU"/AU) AND MYCOBACT?

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6             5 DUP REM L5 (8 DUPLICATES REMOVED)

=> d bib ab kwic

L6   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2005:283672  CAPLUS <<LOGINID::20080325>>
DN   142:334896
TI   Method for diagnosing johne's disease
IN   Momotani, Eiichi; Mori, Yasuyuki;   ***Hikono, Hirokazu***  ; Buza, Joram
     Josephat
PA   Incorporated Administrative Agency National Agriculture and Bio-Oriented
     Research Organization, Japan
SO   PCT Int. Appl., 38 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    -------------------    --------
PI   WO 2005029079        A1    20050331    WO 2003-JP11845        20030917
         W:  AU, JP, US
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IT, LU, MC, NL, PT, RO, SE, SI, SK, TR
     AU 2003272880        A1    20050411    AU 2003-272880         20030917
     US 2008038758        A1    20080214    US 2007-572514         20070426
PRAI WO 2003-JP11845      A     20030917
AB   A method for diagnosing johne's disease is provided, with which an animal
     infected with   ***Mycobacterium***   paratuberculosis (Johne's) can be
     diagnosed at a high sensitivity in the inapparent infection stage before
     the specific antibody level begins to increase, and a large no. of
     specimens can be treated.  The method is characterized in that it
     comprises collecting a blood sample of a subject animal, adding an
     anti-IL-10 antibody and a   ***Mycobacterium***   paratuberculosis antigen
     to the collected blood followed by culturing, and then, measuring the
     IFN.gamma. yield in the cultured blood.  The method is also characterized
     in that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA
     method.  Also provided is a method for diagnosing   ***mycobacteriosis***
     , which is characterized by comprising collecting a blood sample of a
     subject animal, adding an anti-IL-10 antibody and a   ***Mycobacterium***
     antigen to the collected blood followed by culturing, and then, measuring
     the IFN.gamma. yield in the cultured blood.
```

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IN Momotani, Eiichi; Mori, Yasuyuki; ***Hikono, Hirokazu*** ; Buza, Joram Josephat

AB A method for diagnosing johne's disease is provided, with which an animal infected with ***Mycobacterium*** paratuberculosis (Johne's) can be diagnosed at a high sensitivity in the inapparent infection stage before the specific antibody level begins. . . is characterized in that it comprises collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** paratuberculosis antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood. The. . . that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA method. Also provided is a method for diagnosing ***mycobacteriosis*** , which is characterized by comprising collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood.

IT Animals
Blood analysis
Diagnosis
Mycobacterium avium paratuberculosis
(method for diagnosing johne's disease by measuring blood IFN.gamma. by ELISA)

=> d bib ab kwic 2-
YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N):y

L6 ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 1

AN 2004:438665 BIOSIS <<LOGINID::20080325>>

DN PREV200400437489

TI Neutralization of interleukin-10 significantly enhances gamma interferon expression in peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.

AU Buza, Jorarn J.; ***Hikono, Hirokazu*** ; Mori, Yasuyuki; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; Momotani, Eiichi [Reprint Author]

CS ParaTB and Inflammatory Bowel Dis Res Team, NIAH, 3-1-5 Kannondai, Tsukuba, Ibaraki, 3050856, Japan
momotani@affrc.go.jp

SO Infection and Immunity, (April 2004) Vol. 72, No. 4, pp. 2425-2428. print. ISSN: 0019-9567 (ISSN print).

DT Article

LA English

ED Entered STN: 17 Nov 2004
Last Updated on STN: 17 Nov 2004

AB Monoclonal antibody neutralization of interleukin-10 (IL-10) increased Johnin purified protein derivative-induced whole-blood gamma interferon (IFN-gamma) secretion 23-fold and also increased IFN-gamma secretion ninefold following in vitro ***Mycobacterium*** avium subsp. paratuberculosis infection of peripheral blood mononuclear cells. These results demonstrate the suppressive effect of IL-10 on immune responses to M. avium subsp. paratuberculosis infection in cattle.

TI. . . interleukin-10 significantly enhances gamma interferon expression in

peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.

AU Buza, Jorarn J.; ***Hikono, Hirokazu*** ; Mori, Yasuyuki; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; Momotani, Eiichi [Reprint Author]

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ORGN . . .
Animalia
Organism Name
cattle (common): immune responses
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies)
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L6 ANSWER 3 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 2

AN 2004:64047 BIOSIS <<LOGINID::20080325>>

DN PREV200400065534

TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral blood of experimentally infected cattle.

AU Buza, Joram J.; Mori, Yasuyuki; Bari, Abusaleh M.; ***Hikono,*** *** Hirokazu*** ; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; Momotani, Eiichi [Reprint Author]

CS Paratuberculosis and Inflammatory Bowel Disease Research Team, NIAH, 3-1-5 Kan-nondai, Tsukuba, 305-0856, Japan
momotani@affrc.go.jp

SO Infection and Immunity, (December 2003) Vol. 71, No. 12, pp. 7223-7227. print.
ISSN: 0019-9567 (ISSN print).

DT Article

LA English

ED Entered STN: 28 Jan 2004
Last Updated on STN: 28 Jan 2004

AB Blood from cattle with subclinical ***Mycobacterium*** avium subsp. paratuberculosis infection was stimulated with M. avium subsp. paratuberculosis antigens, and expression of interleukin-1beta (IL-1beta), tumor necrosis factor alpha (TNF-alpha), RANTES, monocyte chemoattractant protein 1 (MCP-1), and IL-8 was measured. Expression of TNF-alpha, RANTES, and MCP-1 was lower in infected than in uninfected cattle. The reduced response may weaken protective immunity and perpetuate infection.

TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral. . .
AU Buza, Joram J.; Mori, Yasuyuki; Bari, Abusaleh M.; ***Hikono,*** *** Hirokazu*** ; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; Momotani, Eiichi [Reprint Author]
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ORGN . . .
Animalia
Organism Name
cattle (common): host, breed-Holstein
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L6 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:399194 CAPLUS <<LOGINID::20080325>>
DN 140:39839
TI Studies on diagnostic methods for bovine paratuberculosis
AU Mori, Yasuyuki; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; ***Hikono, Hirokazu*** ; Momotani, Eiichi
CS Immune System Section, Department of Immunology, National Institute of Animal Health, Tsukuba, 305-0856, Japan
SO Dobutsu Eisei Kenkyusho Kenkyu Hokoku (2003), Volume Date 2002, 109, 33-42
CODEN: DEKKC9; ISSN: 1347-2542
PB Nogyo Gijutsu Kenkyu Kiko Dobutsu Eisei Kenkyusho
DT Journal
LA Japanese
AB Current diagnostic tests for paratuberculosis principally rest on serol. assay, bacterial culture and the johnin skin test. However, diagnostic tests that are both sensitive and specific for detecting all subclinically affected animals have not yet been found. Therefore, a no. of studies have been conducted in order to find rapid and accurate diagnostic methods for paratuberculosis. As a result, the following have been found. (1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in fecal samples. (2) In the interferon gamma (IFN-.gamma.) assay using johnin purified protein deriv. (J-PPD), bovine tuberculin PPD and Con A (Con A), IFN-.gamma. responses against J-PPD were the highest in affected animals. On the contrary those of Con A were the highest in healthy animals. Interpretation of the IFN-.gamma. assay by the higher IFN-.gamma. responses against J-PPD than those of Con A is preferable as one of the diagnostic criteria. (3) Monoclonal antibody (711-1-1) which recognizes the lipoarabinomannan antigen of M. avium subsp. paratuberculosis did not react with M. avium subsp. avium, and showed

potential usefulness in the serol. tests. (4) A recombinant alkyl hydroperoxide reductase C of M. avium subsp. paratuberculosis has been prepd. and successfully applied to induce IFN-.gamma. from peripheral blood mononuclear cells of animals infected with M. avium subsp. paratuberculosis. (5) In the course of study on the role of cytokines, monocyte chemoattractant protein-1 seems to be involved in the pathogenesis of paratuberculosis.

AU Mori, Yasuyuki; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; ***Hikono, Hirokazu*** ; Momotani, Eiichi

AB . . . following have been found. (1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in fecal samples. (2) In the interferon gamma (IFN-.gamma.) assay using johnin purified protein deriv. (J-PPD), bovine. . .

ST cattle ***Mycobacterium*** paratuberculosis infection surface antigen IFN induction test; alkyl hydroperoxide reductase antigen cattle IFN induction ***Mycobacterium*** ; reverse transcription PCR monocyte chemoattractant protein mRNA assay

IT Bos taurus
Infection
Mycobacterium avium paratuberculosis
(studies on diagnostic methods for bovine paratuberculosis)

L6 ANSWER 5 OF 5 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 3

AN 2003:329566 BIOSIS <<LOGINID::20080325>>

DN PREV200300329566

TI Studies on the diagnostic methods for bovine paratuberculosis.

AU Mori, Yasuyuki [Reprint Author]; Kikuma, Reiko; Muneta, Yoshihiro; Yoshihara, Kazuhiro; ***Hikono, Hirokazu*** ; Momotani, Eiichi

CS Immune System Section, Department of Immunology, National Institute of Animal Health, 3-1-5 Kannondai, Tsukuba, Ibaraki, 305-0856, Japan yamori@affrc.go.jp

SO Bulletin of the National Institute of Animal Health, (2002) No. 109, pp. 33-42. print.
ISSN: 1347-2542 (ISSN print).

DT Article

LA Japanese

ED Entered STN: 16 Jul 2003
Last Updated on STN: 16 Jul 2003

AB Current diagnostic tests for paratuberculosis principally rest on serological assay, bacterial culture and the johnin skin test. However, diagnostic tests that are both sensitive and specific for detecting all subclinically affected animals have not yet been found. Therefore, a number of studies have been conducted in order to find rapid and accurate diagnostic methods for paratuberculosis. As a result, the following have been found; 1) PCR test with internal control DNA is accurate, sensitive and rapid for the detection of ***Mycobacterium*** avium subsp. paratuberculosis in faecal samples. 2) In the interferon gamma (IFN-gamma) assay using johnin purified protein derivative (J-PPD), bovine tuberculin PPD and concanavalin A (Con A), IFN-gamma responses against J-PPD were the highest in affected animals. On the contrary those of Con A were the highest in healthy animals. Interpretation of the IFN-gamma assay by the higher IFN-gamma responses against J-PPD than those of Con A is preferable as one of the diagnostic criteria. 3) Monoclonal antibody (711-1-1) which recognizes the lipoarabinomannan antigen of M. avium subsp.

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     monocyte chemoattractant protein-1 seems to be involved in the
     pathogenesis of paratuberculosis.
AU   Mori, Yasuyuki [Reprint Author]; Kikuma, Reiko; Muneta, Yoshihiro;
     Yoshihara, Kazuhiro;   ***Hikono, Hirokazu***  ; Momotani, Eiichi
AB.  .  .  following have been found; 1) PCR test with internal control DNA is
     accurate, sensitive and rapid for the detection of   ***Mycobacterium***
     avium subsp. paratuberculosis in faecal samples. 2) In the interferon
     gamma (IFN-gamma) assay using johnin purified protein derivative (J-PPD),
     bovine.  .  .
ORGN .  .  .
        Chordata; Animalia
     Organism Name
        bovine (common): host
     Taxa Notes
        Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates,
        Nonhuman Mammals, Vertebrates
ORGN Classifier
           ***Mycobacteriaceae***     08881
     Super Taxa
           ***Mycobacteria***  ; Actinomycetes and Related Organisms;
        Eubacteria; Bacteria; Microorganisms
     Organism Name
           ***Mycobacterium***   avium paratuberculosis (subspecies): pathogen,
        strain-ATCC 19698, strain-Kag-1
     Taxa Notes
        Bacteria, Eubacteria, Microorganisms


=> e buza joram j/au
E1          11     BUZA J J/AU
E2           3     BUZA JORAM/AU
E3           8 --> BUZA JORAM J/AU
E4           1     BUZA JORAM JOSEPHAT/AU
E5           1     BUZA JORARN J/AU
E6           4     BUZA K/AU
E7          19     BUZA L/AU
E8           1     BUZA L N/AU
E9           1     BUZA L V/AU
E10          7     BUZA LAJOSNE/AU
E11          2     BUZA LASZLO/AU
E12          1     BUZA LEJLA/AU

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L7          11 ("BUZA J J"/AU OR "BUZA JORAM"/AU OR "BUZA JORAM J"/AU OR "BUZA
               JORAM JOSEPHAT"/AU OR "BUZA JORARN J"/AU) AND MYCOBACT?

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L8             3 DUP REM L7 (8 DUPLICATES REMOVED)

=> d bib ab kwic 1-
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YOU HAVE REQUESTED DATA FROM 3 ANSWERS - CONTINUE? Y/(N):y

L8 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:283672 CAPLUS <<LOGINID::20080325>>
DN 142:334896
TI Method for diagnosing johne's disease
IN Momotani, Eiichi; Mori, Yasuyuki; Hikono, Hirokazu; ***Buza, Joram*** *** Josephat***
PA Incorporated Administrative Agency National Agriculture and Bio-Oriented Research Organization, Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005029079	A1	20050331	WO 2003-JP11845	20030917
W: AU, JP, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
AU 2003272880	A1	20050411	AU 2003-272880	20030917
US 2008038758	A1	20080214	US 2007-572514	20070426
PRAI WO 2003-JP11845	A	20030917		

AB A method for diagnosing johne's disease is provided, with which an animal infected with ***Mycobacterium*** paratuberculosis (Johne's) can be diagnosed at a high sensitivity in the inapparent infection stage before the specific antibody level begins to increase, and a large no. of specimens can be treated. The method is characterized in that it comprises collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** paratuberculosis antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood. The method is also characterized in that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA method. Also provided is a method for diagnosing ***mycobacteriosis*** , which is characterized by comprising collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IN Momotani, Eiichi; Mori, Yasuyuki; Hikono, Hirokazu; ***Buza, Joram*** *** Josephat***
AB A method for diagnosing johne's disease is provided, with which an animal infected with ***Mycobacterium*** paratuberculosis (Johne's) can be diagnosed at a high sensitivity in the inapparent infection stage before the specific antibody level begins. . . is characterized in that it comprises collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** paratuberculosis antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood. The. . . that the IFN.gamma. yield in blood is measured by the IFN.gamma. ELISA method. Also provided is a method for diagnosing ***mycobacteriosis*** , which is characterized by comprising collecting a blood sample of a subject animal, adding an anti-IL-10 antibody and a ***Mycobacterium*** antigen to the collected blood followed by culturing, and then, measuring the IFN.gamma. yield in the cultured blood.

IT Animals
Blood analysis
Diagnosis
Mycobacterium avium paratuberculosis
(method for diagnosing johne's disease by measuring blood IFN.gamma. by ELISA)

L8 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
DUPLICATE 1
AN 2004:438665 BIOSIS <<LOGINID::20080325>>
DN PREV200400437489
TI Neutralization of interleukin-10 significantly enhances gamma interferon expression in peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.
AU ***Buza, Jorarn J.*** ; Hikono, Hirokazu; Mori, Yasuyuki; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; Momotani, Eiichi [Reprint Author]
CS ParaTB and Inflammatory Bowel Dis Res Team, NIAH, 3-1-5 Kannondai, Tsukuba, Ibaraki, 3050856, Japan
momotani@affrc.go.jp
SO Infection and Immunity, (April 2004) Vol. 72, No. 4, pp. 2425-2428. print.
ISSN: 0019-9567 (ISSN print).
DT Article
LA English
ED Entered STN: 17 Nov 2004
Last Updated on STN: 17 Nov 2004
AB Monoclonal antibody neutralization of interleukin-10 (IL-10) increased Johnin purified protein derivative-induced whole-blood gamma interferon (IFN-gamma) secretion 23-fold and also increased IFN-gamma secretion ninefold following in vitro ***Mycobacterium*** avium subsp. paratuberculosis infection of peripheral blood mononuclear cells. These results demonstrate the suppressive effect of IL-10 on immune responses to M. avium subsp. paratuberculosis infection in cattle.
TI. . . interleukin-10 significantly enhances gamma interferon expression in peripheral blood by stimulation with Johnin purified protein derivative and by infection with ***Mycobacterium*** avium subsp. paratuberculosis in experimentally infected cattle with paratuberculosis.
AU ***Buza, Jorarn J.*** ; Hikono, Hirokazu; Mori, Yasuyuki; Nagata, Reiko; Hirayama, Sachiyo; Bari, Abusaleh M.; Aodon-geril; Shu, Yujing; Tsuji, Noriko M.; Momotani,. . .
AB. . . increased Johnin purified protein derivative-induced whole-blood gamma interferon (IFN-gamma) secretion 23-fold and also increased IFN-gamma secretion ninefold following in vitro ***Mycobacterium*** avium subsp. paratuberculosis infection of peripheral blood mononuclear cells. These results demonstrate the suppressive effect of IL-10 on immune responses. . .
ORGN . . .
Animalia
Organism Name
cattle (common): immune responses
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa

Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms
Organism Name
Mycobacterium avium paratuberculosis (subspecies)
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L8 ANSWER 3 OF 3 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 2
AN 2004:64047 BIOSIS <<LOGINID::20080325>>
DN PREV200400065534
TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral blood of experimentally infected cattle.
AU ***Buza, Joram J.*** ; Mori, Yasuyuki; Bari, Abusaleh M.; Hikono, Hirokazu; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; Momotani, Eiichi [Reprint Author]
CS Paratuberculosis and Inflammatory Bowel Disease Research Team, NIAH, 3-1-5 Kan-nondai, Tsukuba, 305-0856, Japan
momotani@affrc.go.jp
SO Infection and Immunity, (December 2003) Vol. 71, No. 12, pp. 7223-7227. print.
ISSN: 0019-9567 (ISSN print).
DT Article
LA English
ED Entered STN: 28 Jan 2004
Last Updated on STN: 28 Jan 2004
AB Blood from cattle with subclinical ***Mycobacterium*** avium subsp. paratuberculosis infection was stimulated with M. avium subsp. paratuberculosis antigens, and expression of interleukin-1beta (IL-1beta), tumor necrosis factor alpha (TNF-alpha), RANTES, monocyte chemoattractant protein 1 (MCP-1), and IL-8 was measured. Expression of TNF-alpha, RANTES, and MCP-1 was lower in infected than in uninfected cattle. The reduced response may weaken protective immunity and perpetuate infection.
TI ***Mycobacterium*** avium subsp. paratuberculosis infection causes suppression of RANTES, monocyte chemoattractant protein 1, and tumor necrosis factor alpha expression in peripheral. . .
AU ***Buza, Joram J.*** ; Mori, Yasuyuki; Bari, Abusaleh M.; Hikono, Hirokazu; Aodon-geril; Hirayama, Sachiyo; Shu, Yujing; Momotani, Eiichi [Reprint Author]
AB Blood from cattle with subclinical ***Mycobacterium*** avium subsp. paratuberculosis infection was stimulated with M. avium subsp. paratuberculosis antigens, and expression of interleukin-1beta (IL-1beta), tumor necrosis factor. . .
ORGN . . .
Animalia
Organism Name
cattle (common): host, breed-Holstein
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates
ORGN Classifier
Mycobacteriaceae 08881
Super Taxa
Mycobacteria ; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

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     Organism Name
           ***Mycobacterium***   avium paratuberculosis (subspecies): pathogen
     Taxa Notes
        Bacteria, Eubacteria, Microorganisms


=> s paratuberculosis and interleukin? and interferon? and (diagnos? or assay?)
L9          36 PARATUBERCULOSIS AND INTERLEUKIN? AND INTERFERON? AND (DIAGNOS?
               OR ASSAY?)

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10          19 DUP REM L9 (17 DUPLICATES REMOVED)

=> d bib ab kwic 1-
YOU HAVE REQUESTED DATA FROM 19 ANSWERS - CONTINUE? Y/(N):y

L10  ANSWER 1 OF 19  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2007:906779  CAPLUS <<LOGINID::20080325>>
DN   147:275692
TI   Sequences for Mycobacterium leprae-specific antigens, and methods for
     treating and   ***diagnosing***   M. leprae, particularly in the early
     stages and paucibacillary infections
IN   Ottenhof, Tom Henricus Maria; Geluk, Annemieke; Pereira Sampaio, Elizabeth
PA   Leiden University Medical Center, Neth.
SO   PCT Int. Appl., 70pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    -------------------    --------
PI   WO 2007091881        A2    20070816    WO 2006-NL50105        20060428
     WO 2007091881        A3    20071129
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
             KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX,
             MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
             SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
             VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
PRAI EP 2005-103576       A     20050429
AB   The current invention discloses new Mycobacterium leprae antigens to be
     used in methods and means for detection and   ***diagnostics***   of M.
     leprae infections in subjects, in particular in the early stages of
     infection and in paucibacillary infections, which remain undetected using
     conventional   ***diagnostic***   methods.  The antigens disclosed in the
     invention are specific for M. leprae and the   ***diagnostic***   method
     does not yield 'false pos.' results in individuals having an immune
     response against other Mycobacterial species, such as M. tuberculosis, M.
     bovis, M.   ***paratuberculosis***  , M. avium, M. smegmatis,, M.
     ulcerans, M. microti, and M. marinum, or BCG vaccinated individuals.
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Thus, using bioinformatic anal. the antigen genes ML0573, ML0574, ML0575, ML0576, ML1602, ML1603, ML1604, ML1788, ML1989, ML1990, ML2283 and ML2567 were found to be unique to M. leprae. It was demonstrated, that all of above genes were expressed at the mRNA level in human leprosy tissue. Paucibacillary and reactional leprosy patients and healthy household contacts of leprosy patients produced significant levels of ***interferon*** (IFN)-.gamma. in response to the five unique M. leprae antigens encoded by ML0576, ML1989, ML1990, ML2283 and ML2567. Provided are gene and protein sequences, as well as sequences for epitope peptides for M. leprae-specific antigens ML0576, ML1989, ML1990, ML2283 and ML2567. A method for identifying Mycobacterium leprae antigens is also provided.

TI Sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and paucibacillary infections

AB The current invention discloses new Mycobacterium leprae antigens to be used in methods and means for detection and ***diagnostics*** of M. leprae infections in subjects, in particular in the early stages of infection and in paucibacillary infections, which remain undetected using conventional ***diagnostic*** methods. The antigens disclosed in the invention are specific for M. leprae and the ***diagnostic*** method does not yield 'false pos.' results in individuals having an immune response against other Mycobacterial species, such as M. tuberculosis, M. bovis, M. ***paratuberculosis*** , M. avium, M. smegmatis,, M. ulcerans, M. microti, and M. marinum, or BCG vaccinated individuals. Thus, using bioinformatic anal. the. . . in human leprosy tissue. Paucibacillary and reactional leprosy patients and healthy household contacts of leprosy patients produced significant levels of ***interferon*** (IFN)-.gamma. in response to the five unique M. leprae antigens encoded by ML0576, ML1989, ML1990, ML2283 and ML2567. Provided are. . .

ST sequence Mycobacterium leprae antigen epitope ***diagnoses*** infection; leprosy immunodiagnosis Mycobacterium leprae antigen epitope; vaccine Mycobacterium leprae antigen epitope

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(4-1BB, anti-4-1BB agonistic antibody as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Human groups
(Brazilian patients; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Genetic element
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CpG island, CpG, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, class I, identifying T-cell epitopes for, using computer algorithms; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(HLA, class II, identifying T-cell epitopes for, using computer algorithms; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Proteins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LAG3 (lymphocyte activation gene-3), sol., as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0573, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0574, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0575, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0576, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML0576; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1602, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1603, expressed in human leprosy tissue; sequences for Mycobacterium

leprae-specific antigens, and methods for treating and
diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1604, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and
diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1788, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and
diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1989, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and
diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML1989; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1990, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and
diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML1990; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML2283, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and
diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use);

PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML2283; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML2567, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML2567; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Lipopeptides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Pam3Cys, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Immunostimulants
(adjuvants, DA/TDB; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Immunostimulants
(adjuvants, DDA/MPL; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Immunostimulants
(adjuvants; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Monocyte
(anal., in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Diagnostic*** agents
Vaccines
(antigens or epitopes as; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Lipid A
Lipopolysaccharides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Mycobacterium
(as recombinant expression host; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and

paucibacillary infections)
IT Flagellins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bacterial, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT CD40 (antigen)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(binding CD40 ligand or antibody, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Mammalia
(***diagnosis*** and therapy; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Mycobacterium avium
Mycobacterium bovis
Mycobacterium marinum
Mycobacterium microti
Mycobacterium smegmatis
Mycobacterium tuberculosis
Mycobacterium ulcerans
(differentiating from; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Leprosy
(early stages ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT T cell (lymphocyte)
(epitopes; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Epitopes
(from ML0576, ML1989, ML1990, ML2283 and ML2567 antigens; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT T cell (lymphocyte)
(helper cell, measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Algorithm
(identifying HLA class I and/or class II T-cell epitopes using; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT ***Diagnosis***
(immunodiagnosis, of ML0576, ML1989, ML1990, ML2283 and ML2567 antigens; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Blood analysis

(in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Interleukin*** 10
Interleukin 15
Interleukin 2
Interleukin 4
Interleukin 6
Macrophage inflammatory protein 1.beta.
Transforming growth factor .beta.
Tumor necrosis factors
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antibodies and Immunoglobulins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal, anti-4-1BB, agonistic, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Genome
(of M. leprae, identifying unique antigen gene candidates in; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Protein sequences
(of M. leprae-specific antigens ML0576, ML1989, ML1990, ML2283 and ML2567; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT DNA sequences
(of M. leprae-specific genes ML0576, ML1989, ML1990, ML2283 and ML2567; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Blood cell
(of infected subject, IFN-.gamma. response in; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Interleukin*** 12
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study)); BIOL (Biological study)
(p70, measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Human
(patients; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Infection
(paucibacillary, ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and

diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT Bioinformatics
(sequence annotation, M. leprae unique genes; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Molecular cloning
Mycobacterium leprae
Test kits
(sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Skin
(test, by applying antigen under top skin; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Mycobacterium BCG
(vaccine, differentiating from; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Interferons***
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.alpha., measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Interferons***
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.beta., measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Interferons***
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.gamma., measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 141256-04-4, QS21
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MPL, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-88-2 946442-91-7
RL: PRP (Properties)
(Unclaimed; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and paucibacillary infections)

IT 946400-78-8 946400-79-9 946400-80-2 946400-81-3 946400-82-4
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use);

PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence, epitope; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-52-0 946442-53-1 946442-54-2 946442-55-3 946442-56-4
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 24939-03-5, Poly(I:C) 87420-41-5, Pam3Cys 911642-39-2, IC 31
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 83869-56-1, GM-CSF
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-57-5, DNA (Mycobacterium leprae gene ML0576) 946442-58-6, DNA (Mycobacterium leprae gene ML1989) 946442-59-7, DNA (Mycobacterium leprae gene ML1990) 946442-60-0, DNA (Mycobacterium leprae gene ML2283) 946442-61-1, DNA (Mycobacterium leprae gene ML2567)
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(nucleotide sequence; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-98-4 946442-99-5 946443-00-1 946443-01-2 946443-02-3 946443-03-4 946443-04-5 946443-05-6 946443-06-7 946443-07-8 946443-08-9 946443-09-0
RL: PRP (Properties)
(unclaimed nucleotide sequence; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and paucibacillary infections)

IT 946442-86-0 946442-87-1 946442-89-3 946442-90-6 946442-92-8 946442-93-9 946442-94-0 946442-95-1 946442-96-2 946442-97-3
RL: PRP (Properties)
(unclaimed protein sequence; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and paucibacillary infections)

L10 ANSWER 2 OF 19 MEDLINE on STN
AN 2007416292 MEDLINE <<LOGINID::20080325>>
DN PubMed ID: 17502388
TI Influence of Mycobacterium avium subsp. ***paratuberculosis*** on colitis development and specific immune responses during disease.
AU Singh Udai P; Singh Shailesh; Singh Rajesh; Karls Russell K; Quinn

Frederick D; Potter Morris E; Lillard James W Jr
CS Brown Cancer Center, Department of Microbiology and Immunology, University of Louisville, 580 S. Preston Street, Baxter II/Room 304C, Louisville, KY 40202, USA.
NC AI 57808 (United States NIAID)
GM 08248 (United States NIGMS)
MD 000525 (United States NCMHD)
RR 03034 (United States NCRR)
SO Infection and immunity, (2007 Aug) Vol. 75, No. 8, pp. 3722-8. Electronic Publication: 2007-05-14.
Journal code: 0246127. ISSN: 0019-9567.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LA English
FS Priority Journals
EM 200709
ED Entered STN: 20 Jul 2007
Last Updated on STN: 7 Sep 2007
Entered Medline: 6 Sep 2007
AB The granulomatous and intramural inflammation observed in cases of inflammatory bowel diseases (IBD) and veterinary Johne's disease suggests that Mycobacterium avium subsp. ***paratuberculosis*** is a causative agent. However, an incomplete understanding of the immunological steps responsible for the pathologies of IBD makes this conclusion uncertain. Sera from ***interleukin*** -10-deficient (IL-10(-/-)) mice with spontaneous colitis displayed significantly higher M. avium subsp. ***paratuberculosis*** -specific immunoglobulin G2a antibody responses than did sera from similar mice without disease. Pathogen-free IL-10(-/-) mice received control vehicle or the vehicle containing heat-killed or live M. avium subsp. ***paratuberculosis*** . Mucosal CD4(+) T cells from the mice that developed colitis proliferated and secreted higher levels of gamma ***interferon*** and tumor necrosis factor alpha after ex vivo stimulation with a Vbeta11(+) T-cell receptor-restricted peptide from the MPT59 antigen (Ag85B) than those secreted from cells from mice before the onset of colitis. The data from this study provide important information regarding the mechanisms of colitis in IL-10(-/-) mice, which are driven in part by Ag85B-specific T cells. The data suggest a plausible mechanism of Ag-specific T-cell responses in colitis driven by potent Ags conserved in Mycobacterium species.
TI Influence of Mycobacterium avium subsp. ***paratuberculosis*** on colitis development and specific immune responses during disease.
AB . . . and intramural inflammation observed in cases of inflammatory bowel diseases (IBD) and veterinary Johne's disease suggests that Mycobacterium avium subsp. ***paratuberculosis*** is a causative agent. However, an incomplete understanding of the immunological steps responsible for the pathologies of IBD makes this conclusion uncertain. Sera from ***interleukin*** -10-deficient (IL-10(-/-)) mice with spontaneous colitis displayed significantly higher M. avium subsp. ***paratuberculosis*** -specific immunoglobulin G2a antibody responses than did sera from similar mice without disease. Pathogen-free IL-10(-/-) mice received control vehicle or the vehicle containing heat-killed or live M. avium subsp. ***paratuberculosis*** . Mucosal CD4(+) T cells from the mice that developed colitis proliferated and secreted higher levels of gamma ***interferon*** and tumor necrosis factor alpha after ex vivo stimulation with a Vbeta11(+) T-cell receptor-restricted peptide

from the MPT59 antigen (Ag85B). . .
CT . . .
Antigens, Bacterial: IM, immunology
CD4-Positive T-Lymphocytes: IM, immunology
Colitis: IM, immunology
*Colitis: MI, microbiology
*Colitis: PA, pathology
Disease Models, Animal
*** Enzyme-Linked Immunosorbent Assay***
Humans
Immunoglobulin G: BL, blood
*** Interferon Type II: BI, biosynthesis***
*** Interleukin-10: DF, deficiency***
Intestinal Mucosa: IM, immunology
Ligands
Mice
Mice, Knockout
****Mycobacterium avium subsp. paratuberculosis: IM, immunology***
****Paratuberculosis: IM, immunology***
****Paratuberculosis: PA, pathology***
Peptides: IM, immunology
Receptors, Antigen, T-Cell: IM, immunology
Receptors, CXCR3
Receptors, Chemokine: AG, agonists
Receptors, Chemokine: IM, immunology
. . .
RN ***130068-27-8 (Interleukin-10)*** ; ***82115-62-6 (Interferon Type*** *** II)***
CN. . . 0 (Peptides); 0 (Receptors, Antigen, T-Cell); 0 (Receptors, CXCR3); 0 (Receptors, Chemokine); 0 (Tumor Necrosis Factor-alpha); 0 (antigen 85B, Mycobacterium ***paratuberculosis***)

L10 ANSWER 3 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 2006:496945 BIOSIS <<LOGINID::20080325>>
DN PREV200600503265
TI Disturbed cytokine response to mycobacterium avium subspecies ***paratuberculosis*** is dysregulated in patients with Crohn's disease.
AU Sibartie, Shomik; Keohane, John; Scully, Paul; O'Neill, Shaun; O'Mahony, Jim; O'Mahony, Liam; Shanahan, Fergus
SO Gastroenterology, (APR 2006) Vol. 130, No. 4, Suppl. 2, pp. A240. Meeting Info.: Digestive Disease Week Meeting/107th Annual Meeting of the American-Gastroenterological-Association. Los Angeles, CA, USA. May 19 -24, 2006. Amer Gastroenterol Assoc Inst.
CODEN: GASTAB. ISSN: 0016-5085.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 4 Oct 2006
Last Updated on STN: 4 Oct 2006
AB Background: Mycobacterium avium subspecies ***paratuberculosis*** (MAP) has been a source of controversy since it was first suggested as a possible cause for Crohn's disease. While a number of studies have focused on identification of the organism in Crohn's disease tissues and others have assessed the serologic response to MAP, few studies have examined the cellular immune response to MAP. Aim: To compare the cellular response to Mycobacterium avium subspecies

paratuberculosis between Crohn's disease patients and healthy volunteers. Methods: Peripheral blood mononuclear cells (PBMCs) were isolated from 24 Crohn's disease patients and 20 healthy volunteers. After in-vitro co-incubation for 72 his with MAP ATCC 43019 at several concentrations, supernatants were harvested and analysed for IL2,IL-4,IL-6,IL-8,IL-10,TNF-alpha and IFN-gamma using cytometric bead analysis. PBMCs stimulated with Salmonella typhimurium (ST)were used as positive controls. Results: Compared to healthy volunteers, PBMCs from Crohn's disease patients secreted higher levels($p < 0.05$)of IL-6(4265 +/- 260 vs. 2865 +/- 386 pg/ml),TNF-alpha (2190 +/- 247 vs. 1200 +/- 228pg/ml) and IL-10(265 +/- 53 vs. 81 +/- 12 pg/ml) upon exposure to MAP(1 MAP bacterial cell:1 PBMC) but showed no difference when exposed to ST. There was a lower IFN-gamma response from Crohn's disease, patients to MAP(322 125 vs. 1658 424 pg/ml) but this also occurred in response to ST. The ratio of IFN-gamma to IL-10 was significantly lower for Cretin's disease patients' PBMCs exposed to MAP compared to healthy volunteers ($p < 0.05$)but not for ST. There were no differences in IL-8, IL-2 and IL-4 levels. Prior BCG vaccination and concurrent immunosuppressives had no impact on the levels of cytokines secreted. Conclusion: A diminished Th1 response to MAP in Crohn's disease patients may allow for prolonged intracellular survival of MAP in phagocytic cells. This might account for the increased frequency of MAP detection in patients with Crohn's disease but does not imply cause and effect.

TI Disturbed cytokine response to mycobacterium avium subspecies ***paratuberculosis*** is dysregulated in patients with Crohn's disease.

AB Background: Mycobacterium avium subspecies ***paratuberculosis*** (MAP) has been a source of controversy since it was first suggested as a possible cause for Crohn's disease. While. . . few studies have examined the cellular immune response to MAP. Aim: To compare the cellular response to Mycobacterium avium subspecies ***paratuberculosis*** between Crohn's disease patients and healthy volunteers. Methods: Peripheral blood mononuclear cells (PBMCs) were isolated from 24 Crohn's disease patients. . .

IT . . .
system, blood and lymphatics, PBMC; phagocytic cell: immune system

IT Diseases
Crohn's disease: digestive system disease, immune system disease, etiology, ***diagnosis***

IT Chemicals & Biochemicals
cytokines; IFN-gamma [***interferon*** -gamma]; IL-10 [***interleukin*** -10]; TNF-alpha [tumor necrosis factor-alpha]; IL-6 [***interleukin*** -6]; IL-8 [***interleukin*** -8]; IL-2 [***interleukin*** -2]; IL-4 [***interleukin*** -4]

ORGN . . .
Primates, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium avium ***paratuberculosis*** (subspecies): pathogen

Taxa Notes
Bacteria, Eubacteria, Microorganisms

L10 ANSWER 4 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 2006:423091 BIOSIS <<LOGINID::20080325>>
DN PREV200600423340
TI Differential expression of genes encoding CD30L and P-selectin in cattle with Johne's disease: Progress toward a ***diagnostic*** gene expression signature.
AU Skovgaard, Kerstin [Reprint Author]; Grell, Susanne Nedergaard; Heegaard, Peter M. H.; Jungersen, Gregers; Pudrith, Chas B.; Coussens, Paul M.
CS Danish Inst Food and Vet Res, Dept Vet Diagnost and Res, Bulowsvej 27, DK-1790 Copenhagen V, Denmark
kis@dfvf.dk
SO Veterinary Immunology and Immunopathology, (AUG 15 2006) Vol. 112, No. 3-4, pp. 210-224.
CODEN: VIIMDS. ISSN: 0165-2427.
DT Article
LA English
ED Entered STN: 23 Aug 2006
Last Updated on STN: 23 Aug 2006
AB Mycobacterium avium subspecies ***paratuberculosis*** (Mycobacterium ***paratuberculosis***), the causative agent of ***paratuberculosis***
(paraTB) or Johne's disease in ruminants, is a health problem for the global cattle industry with significant economic losses related to decreased milk production and reduced fertility. Commonly paraTB in cattle is ***diagnosed*** by antibody detection by serum enzyme-linked immunosorbent ***assay*** (ELISA), by detection of the pathogen by cultivation of individual faecal samples, or by in vitro measurement of cell mediated immune responses using the IFN-gamma test. There is an ongoing need for developing new ***diagnostic*** approaches as all currently available ***diagnostic*** tests for paraTB may fail to detect sub-clinical infection. We used cDNA microarrays to simultaneously measure expression of over 1300 host genes to help identify a subset of gene expression changes that might provide a unique gene expression signature for paraTB infection. In the present study, non-stimulated leukocytes isolated from 10 sub-clinical paraTB infected cows were examined for genes being expressed at significantly different levels than in similar cells from control cows with the same herd background. We included cattle (Holstein) from two locations (Denmark and USA) for the microarray experiment. Our results indicate that expression profiles of at least 52 genes are different in leukocytes from M.
paratuberculosis infected cattle compared to control cattle. Gene
expression differences were verified by quantitative real-time reverse transcriptase polymerase chain reactions (qRT-PCR) on the same group of cattle (Holstein) used for the microarray experiment. In order to assess the generality of the observed gene expression, a second and different group of cattle (Jersey) was also examined using qRT-PCR. Out of the seven genes selected for qRT-PCR, CD30 ligand (CD30L) and P-selectin were consistently differentially expressed in freshly isolated leukocytes from paraTB infected and control animals of both breeds of cattle. Although further work is clearly needed to develop a more complete gene expression signature specific for paraTB, our results demonstrate that a subset of genes in leukocytes are consistently expressed at different levels, depending upon M. ***paratuberculosis*** infection status. (c) 2006 Elsevier B.V. All rights reserved.
TI Differential expression of genes encoding CD30L and P-selectin in cattle with Johne's disease: Progress toward a ***diagnostic*** gene expression signature.

AB Mycobacterium avium subspecies ***paratuberculosis*** (Mycobacterium ***paratuberculosis***), the causative agent of ***paratuberculosis*** (paraTB) or Johne's disease in ruminants, is a health problem for the global cattle industry with significant economic losses related to decreased milk production and reduced fertility. Commonly paraTB in cattle is ***diagnosed*** by antibody detection by serum enzyme-linked immunosorbent ***assay*** (ELISA), by detection of the pathogen by cultivation of individual faecal samples, or by in vitro measurement of cell mediated immune responses using the IFN-gamma test. There is an ongoing need for developing new ***diagnostic*** approaches as all currently available ***diagnostic*** tests for paraTB may fail to detect sub-clinical infection. We used cDNA microarrays to simultaneously measure expression of over 1300. . . the microarray experiment. Our results indicate that expression profiles of at least 52 genes are different in leukocytes from M. ***paratuberculosis*** infected cattle compared to control cattle. Gene expression differences were verified by quantitative real-time reverse transcriptase polymerase chain reactions (qRT-PCR). . . paraTB, our results demonstrate that a subset of genes in leukocytes are consistently expressed at different levels, depending upon M. ***paratuberculosis*** infection status. (c) 2006 Elsevier B.V. All rights reserved.
IT . . .
Organisms
feces: digestive system; leukocyte: immune system, blood and lymphatics
IT Diseases
Johne's disease: bacterial disease, infectious disease
IT Diseases
paratuberculosis : bacterial disease, infectious disease, etiology
Paratuberculosis (MeSH)
IT Chemicals & Biochemicals
IFN-gamma [***interferon*** -gamma]; cDNA [complementary DNA]
GEN. . . leukemia inhibitory factor mRNA gene] (Bovidae); bovine TNF-alpha-CE gene [bovine tumor necrosis factor-alpha-converting enzyme gene] (Bovidae); bovine IL-1RA gene [bovine ***interleukin*** -1 receptor antagonist mRNA gene] (Bovidae); bovine P-selectin gene [bovine P-selectin mRNA gene] (Bovidae); bovine Caspase-7 gene [bovine Mch-7 isoform alpha. . .

L10 ANSWER 5 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 1
AN 2005:498376 BIOSIS <<LOGINID::20080325>>
DN PREV200510279086
TI Bovine NK cells can produce gamma ***interferon*** in response to the secreted mycobacterial proteins ESAT-6 and MPP14 but not in response to MPB70.
AU Olsen, Ingrid [Reprint Author]; Boysen, Preben; Kulberg, Siri; Hope, Jayne C.; Jungersen, Gregers; Storset, Anne K.
CS Natl Vet Inst, POB 8156 DEP, N-0033 Oslo, Norway
Ingrid.Olsen@vetinst.no
SO Infection and Immunity, (SEP 2005) Vol. 73, No. 9, pp. 5628-5635.
CODEN: INFIBR. ISSN: 0019-9567.
DT Article
LA English
ED Entered STN: 16 Nov 2005
Last Updated on STN: 16 Nov 2005

AB Bovine NK cells have recently been characterized and the present study describes the interaction between NK cells, antigen-presenting cells, and secreted mycobacteriall proteins. Gamma ***interferon*** (IFN-gamma) production by NK cells was seen in approximately 30% of noninfected calves in response to the Mycobacterium tuberculosis complex-specific protein ESAT-6, MPP14 from Mycobacterium avium subsp. ***paratuberculosis*** , and purified protein derivative (PPD) from M. tuberculosis. In contrast, no response was induced by MPB70, which is another M. tuberculosis complex-specific secreted antigen. The production of IFN-gamma by NK cells in whole blood in response to ESAT-6 and MPP14 was demonstrated using intracellular staining together with surface labeling for the NK cell-specific receptor, NKp46, or CD3. Furthermore, the depletion of NK cells from peripheral blood mommuclear cells completely abolished the IFN-gamma production. The response was mediated through stimulation of adherent cells and was largely independent of contact between adherent cells and the NK cells. Neutralization of ***interleukin*** -12 only partly inhibited IFN-gamma production, showing that other cytokines were also involved. The demonstration of NK cell-mediated IFN-gamma production in young cattle provides an explanation for the nonspecific IFN-gamma response frequently encountered in young cattle when using the IFN-gamma test in ***diagnosis*** of mycobacteriall infections.

TI Bovine NK cells can produce gamma ***interferon*** in response to the secreted mycobacterial proteins ESAT-6 and MPP14 but not in response to MPB70.

AB. . . recently been characterized and the present study describes the interaction between NK cells, antigen-presenting cells, and secreted mycobacteriall proteins. Gamma ***interferon*** (IFN-gamma) production by NK cells was seen in approximately 30% of noninfected calves in response to the Mycobacterium tuberculosis complex-specific protein ESAT-6, MPP14 from Mycobacterium avium subsp. ***paratuberculosis*** , and purified protein derivative (PPD) from M. tuberculosis. In contrast, no response was induced by MPB70, which is another M.. . . through stimulation of adherent cells and was largely independent of contact between adherent cells and the NK cells. Neutralization of ***interleukin*** -12 only partly inhibited IFN-gamma production, showing that other cytokines were also involved. The demonstration of NK cell-mediated IFN-gamma production in. . . cattle provides an explanation for the nonspecific IFN-gamma response frequently encountered in young cattle when using the IFN-gamma test in ***diagnosis*** of mycobacteriall infections.

IT . . .
cell; peripheral blood mononuclear cell: immune system, blood and lymphatics; antigen-presenting cell: immune system

IT Diseases
mycobacterial infection: bacterial disease, ***diagnosis*** Mycobacterium Infections (MeSH)

IT Chemicals & Biochemicals
CD3; ***interferon*** -gamma [IFN-gamma]; ***interleukin*** -12; ESAT-6; NKp46; purified protein derivative; MPB70; mycobacterial proteins; MPP14

ORGN . . .

Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium tuberculosis (species): pathogen
Mycobacterium avium ***paratuberculosis*** (subspecies): pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L10 ANSWER 6 OF 19 MEDLINE on STN
AN 2005487701 MEDLINE <<LOGINID::20080325>>
DN PubMed ID: 15992970
TI Vaccination of sheep against M. ***paratuberculosis*** : immune parameters and protective efficacy.
AU Begg D J; Griffin J F T
CS Disease Research Laboratory, Department of Microbiology and Immunology, University of Otago, P.O. Box 56, Dunedin, New Zealand.
SO Vaccine, (2005 Oct 10) Vol. 23, No. 42, pp. 4999-5008.
Journal code: 8406899. ISSN: 0264-410X.
CY Netherlands
DT (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LA English
FS Priority Journals
EM 200511
ED Entered STN: 14 Sep 2005
Last Updated on STN: 11 Nov 2005
Entered Medline: 10 Nov 2005
AB Johne's disease in ruminants is caused by the pathogenic bacterium Mycobacterium avium subspecies ***paratuberculosis*** (Map). Currently available Map commercial vaccines protect against clinical disease but not infection. In this study, the proprietary Johne's vaccine Neoparasec and an aqueous formulation of Map 316F (AquaVax) were tested in sheep. Detailed immunological examination of blood and gut-associated lymphoid tissues was carried out on animals after vaccination and challenge with virulent Map to identify markers of protective immunity. Neoparasec vaccination provided significant protection against disease while AquaVax did not. Immune animals had stronger cell-mediated responses and altered proportions of CD4+, CD8+, CD25+ and B cells in blood, spleen and the gut lymphatics, than diseased animals.
TI Vaccination of sheep against M. ***paratuberculosis*** : immune parameters and protective efficacy.
AB Johne's disease in ruminants is caused by the pathogenic bacterium Mycobacterium avium subspecies ***paratuberculosis*** (Map). Currently available Map commercial vaccines protect against clinical disease but not infection. In this study, the proprietary Johne's vaccine. . .
CT . . .
Vaccines: AD, administration & dosage
*Bacterial Vaccines: IM, immunology
CD4-Positive T-Lymphocytes: IM, immunology
CD8-Positive T-Lymphocytes: IM, immunology
Disease Models, Animal
*** Enzyme-Linked Immunosorbent Assay***
*** Interferon Type II: AN, analysis***
Intestinal Mucosa: IM, immunology
Lymphocyte Activation
Lymphocyte Subsets: IM, immunology
****Mycobacterium avium subsp. paratuberculosis: IM, immunology***

****Paratuberculosis: PC, prevention & control***
*** Receptors, Interleukin-2: AN, analysis***
Sheep
*Sheep Diseases: PC, prevention & control
Spleen: IM, immunology
RN ***82115-62-6 (Interferon Type II)***
CN 0 (Antibodies, Bacterial); 0 (Bacterial Vaccines); 0 (Receptors, ***Interleukin*** -2)

L10 ANSWER 7 OF 19 CABA COPYRIGHT 2008 CABI on STN DUPLICATE 2
AN 2006:49179 CABA <<LOGINID::20080325>>
DN 20063031176
TI Inflammatory cytokine gene expression in different types of granulomatous lesions during asymptomatic stages of bovine ***paratuberculosis***
AU Tanaka, S.; Sato, M.; Onitsuka, T.; Kamata, H.; Yokomizo, Y.
CS Comparative Pathology Section, Kyushu Research Station, National Institute of Animal Health, Chuzan-cho 2702, Kagoshima 891-0105, Japan. tanakas@affrc.go.jp
SO Veterinary Pathology, (2005) Vol. 42, No. 5, pp. 579-588. 41 ref.
Publisher: American College of Veterinary Pathologists Inc. Lawrence
ISSN: 0300-9858
DOI: 10.1354/vp.42-5-579
CY United States
DT Journal
LA English
ED Entered STN: 2 Mar 2006
Last Updated on STN: 2 Mar 2006
AB The granulomatous lesions in bovine ***paratuberculosis*** have been classified into two types, i.e., the lepromatous type and the tuberculoid type. To clarify the immunopathologic mechanisms at the site of infection, we compared inflammatory cytokine gene expression between the two types of lesions. Samples were obtained from noninfected control cows (n=5) and naturally infected cows (n=7) that were ***diagnosed*** by enzyme-linked immunosorbent ***assay*** (ELISA) and faecal culture test. Although none of the infected cows showed clinical signs, tuberculoid lesions were observed in five cows (tuberculoid group) and lepromatous lesions in two cows (lepromatous group). Among the cytokines examined by reverse transcription-polymerase chain reaction (RT-PCR), Th2-type cytokines ***interleukin*** -4 (IL-4) and IL-10, and Th1-type cytokine IL-2 were expressed more significantly in the lepromatous group than in the tuberculoid (P<0.01) and noninfected groups (P<0.05). No statistical differences were observed in the expression of ***interferon*** -gamma, IL-1 beta, TNF-alpha, and GM-CSF among lepromatous, tuberculoid, and noninfected groups. Expression of proinflammatory cytokine IL-12 mRNA, however, did not differ among the three groups; IL-18 was expressed at lower levels in the lepromatous group than in the tuberculoid group and the noninfected group (P<0.0001). Moreover, the number of cells in which IL-18 mRNAs were detected by in situ hybridization was markedly decreased in the lepromatous group. These results indicate that the formation of lepromatous-type lesions or tuberculoid-type lesions may be influenced by alterations in Th1/Th2-type cytokine production and that IL-18 may play an important role in a Th1-to-Th2 switch in ***paratuberculosis*** .
TI Inflammatory cytokine gene expression in different types of granulomatous lesions during asymptomatic stages of bovine ***paratuberculosis*** .
AB The granulomatous lesions in bovine ***paratuberculosis*** have been classified into two types, i.e., the lepromatous type and the tuberculoid

type. To clarify the immunopathologic mechanisms at. . . the two types of lesions. Samples were obtained from noninfected control cows (n=5) and naturally infected cows (n=7) that were ***diagnosed*** by enzyme-linked immunosorbent ***assay*** (ELISA) and faecal culture test. Although none of the infected cows showed clinical signs, tuberculoid lesions were observed in five. . . and lepromatous lesions in two cows (lepromatous group). Among the cytokines examined by reverse transcription-polymerase chain reaction (RT-PCR), Th2-type cytokines ***interleukin*** -4 (IL-4) and IL-10, and Th1-type cytokine IL-2 were expressed more significantly in the lepromatous group than in the tuberculoid (P<0.01) and noninfected groups (P<0.05). No statistical differences were observed in the expression of ***interferon*** -gamma, IL-1 beta, TNF-alpha, and GM-CSF among lepromatous, tuberculoid, and noninfected groups. Expression of proinflammatory cytokine IL-12 mRNA, however, did not. . . influenced by alterations in Th1/Th2-type cytokine production and that IL-18 may play an important role in a Th1-to-Th2 switch in ***paratuberculosis*** .

CT cows; cytokines; disease course; gene expression; genes; granuloma; histopathology; immunopathology; ***interferon*** ; ***interleukin*** 1; ***interleukin*** 10; ***interleukin*** 2; ***interleukin*** 4; ***interleukins*** ; messenger RNA; ***paratuberculosis*** ; tumour necrosis factor

ST ***interleukin*** 18

ORGN cattle; Mycobacterium avium subsp. ***paratuberculosis***

L10 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 3

AN 2004:1056118 CAPLUS <<LOGINID::20080325>>

DN 142:73022

TI Analysis of the immune response to Mycobacterium avium subsp. ***Paratuberculosis*** in experimentally infected calves

AU Koo, Hye Cheong; Park, Yong Ho; Hamilton, Mary Jo; Barrington, George M.; Davies, Christopher J.; Kim, Jong Bae; Dahl, John L.; Waters, W. Ray; Davis, William C.

CS Department of Veterinary Microbiology, College of Veterinary Medicine and School of Agricultural Biotechnology, Seoul National University, Seoul, S. Korea

SO Infection and Immunity (2004), 72(12), 6870-6883
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

AB Johne's disease of cattle is widespread and causes significant economic loss to producers. Control has been hindered by limited understanding of the immune response to the causative agent, Mycobacterium avium subsp. ***paratuberculosis*** , and lack of an effective vaccine and sensitive specific ***diagnostic*** ***assays*** . The present study was conducted to gain insight into factors affecting the immune response to M. avium subsp. ***paratuberculosis*** . A persistent proliferative response to M. avium subsp. ***paratuberculosis*** purified protein deriv. and sol. M. avium subsp. ***paratuberculosis*** antigens was detected in orally infected neonatal calves 6 mo postinfection (p.i.) by flow cytometry (FC). CD4+ T cells with a memory phenotype (CD45R0+) expressing CD25 and CD26 were the predominant cell type responding to antigens. Few CD8+ T cells proliferated in response to antigens until 18 mo p.i. .gamma..delta. T cells did not appear to respond to antigen until 18 mo p.i. The majority of WC1+ CD2- and a few WC1- CD2+ .gamma..delta. T cells expressed CD25 at time zero. By 18 mo, however, subsets of

.gamma..delta. T cells from both control and infected animals showed an increase in expression of CD25, ACT2, and CD26 in the presence of the antigens. Two populations of CD3-. non-T non-B null cells, CD2+ and CD2-, proliferated in cell cultures from some control and infected animals during the study, with and without antigen. The studies clearly show multicolor FC offers a consistent reliable way to monitor the evolution and changes in the immune response to M. avium subsp. ***paratuberculosis*** that occur during disease progression.

RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Analysis of the immune response to Mycobacterium avium subsp. ***Paratuberculosis*** in experimentally infected calves

AB . . . to producers. Control has been hindered by limited understanding of the immune response to the causative agent, Mycobacterium avium subsp. ***paratuberculosis*** , and lack of an effective vaccine and sensitive specific ***diagnostic*** ***assays*** . The present study was conducted to gain insight into factors affecting the immune response to M. avium subsp. ***paratuberculosis*** . A persistent proliferative response to M. avium subsp. ***paratuberculosis*** purified protein deriv. and sol. M. avium subsp. ***paratuberculosis*** antigens was detected in orally infected neonatal calves 6 mo postinfection (p.i.) by flow cytometry (FC). CD4+ T cells with. . . FC offers a consistent reliable way to monitor the evolution and changes in the immune response to M. avium subsp. ***paratuberculosis*** that occur during disease progression.

ST Mycobacterium infection cattle ***interleukin*** ***interferon*** TCR flow cytometry

IT ***Interleukin*** 2 receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.alpha. chain; flow cytometric anal. of immune response to Mycobacterium avium infection in calves)

IT ***Interferons***
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.gamma.; flow cytometric anal. of immune response to Mycobacterium avium infection in calves)

L10 ANSWER 9 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 4

AN 2004:178760 BIOSIS <<LOGINID::20080325>>

DN PREV200400179647

TI Cytokine gene expression in peripheral blood mononuclear cells and tissues of cattle infected with Mycobacterium avium subsp. ***paratuberculosis*** : Evidence for an inherent proinflammatory gene expression pattern.

AU Coussens, Paul M. [Reprint Author]; Verman, Nitin; Coussens, Marc A.; Elftman, Michael D.; McNulty, Amanda M.

CS Department of Animal Science, Michigan State University, 1205H Anthony Hall, East Lansing, MI, 48824, USA
coussens@msu.edu

SO Infection and Immunity, (March 2004) Vol. 72, No. 3, pp. 1409-1422. print. ISSN: 0019-9567 (ISSN print).

DT Article

LA English

ED Entered STN: 31 Mar 2004
Last Updated on STN: 31 Mar 2004

AB In cattle and other ruminants, infection with the intracellular pathogen Mycobacterium avium subsp. ***paratuberculosis*** results in a

granulomatous enteritis (Johne's disease) that is often fatal. The key features of host immunity to M. avium subsp. ***paratuberculosis*** infection include an appropriate early proinflammatory and cytotoxic response (Th1-like) that eventually gives way to a predominant antibody-based response (Th2-like). Clinical disease symptoms often appear subsequent to waning of the Th1-like immune response. Understanding why this shift in the immune response occurs and the underlying molecular mechanisms involved is critical to future control measures and ***diagnosis*** . Previous studies have suggested that M. avium subsp. ***paratuberculosis*** may suppress gene expression in peripheral blood mononuclear cells (PBMCs) from infected cows, despite a continued inflammatory reaction at sites of infection. In the present study, we tested the hypothesis that exposure to M. avium subsp. ***paratuberculosis*** suppresses a proinflammatory gene expression pattern in PBMCs from infected cows. To do this, we examined expression of genes encoding ***interleukin*** -1alpha (IL-1alpha), IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p35, IL-16, and IL-18, as well as genes encoding gamma ***interferon*** (IFN-gamma), transforming growth factor beta (TGF-beta), and tumor necrosis factor alpha (TNF-alpha), in PBMCs, intestinal lesions, and mesenteric lymph nodes of cattle naturally infected with M. avium subsp. ***paratuberculosis*** . Cytokine gene expression in these cells and tissues was compared to expression in similar cells and tissues from control uninfected cattle. Our comprehensive results demonstrate that for most cytokine genes, including the genes encoding IFN-gamma, TGF-beta, TNF-alpha, IL-1alpha, IL-4, IL-6, IL-8, and IL-12p35, differential expression in PBMCs from infected and control cattle did not require stimulation with M. avium subsp. ***paratuberculosis*** . In fact, stimulation with M. avium subsp. ***paratuberculosis*** tended to reduce the differential expression observed in infected and uninfected cows for genes encoding IFN-gamma, IL-1alpha, and IL-6. Only IL-10 gene expression was consistently enhanced by M. avium subsp. ***paratuberculosis*** stimulation of PBMCs from subclinically infected cattle. In ileal tissues from M. avium subsp. ***paratuberculosis*** -infected cattle, expression of the genes encoding IFN-gamma, TGF-beta, IL-5, and IL-8 was greater than the expression in comparable tissues from control uninfected cattle, while expression of the gene encoding IL-16 was lower in tissues from infected cattle than in control tissues. Mesenteric lymph nodes draining sites of M. avium subsp. ***paratuberculosis*** infection expressed higher levels of IL-1alpha, IL-8, IL-2, and IL-10 mRNA than similar tissues from control uninfected cattle expressed. In contrast, the genes encoding TGF-beta and IL-16 were expressed at lower levels in lymph nodes from infected cattle than in tissues from uninfected cattle. Taken together, our results suggest that cells or other mechanisms capable of limiting proinflammatory responses to M. avium subsp. ***paratuberculosis*** develop in infected cattle and that a likely place for development and expansion of these cell populations is the mesenteric lymph nodes draining sites of infection.

TI Cytokine gene expression in peripheral blood mononuclear cells and tissues of cattle infected with Mycobacterium avium subsp. ***paratuberculosis*** : Evidence for an inherent proinflammatory gene expression pattern.

AB In cattle and other ruminants, infection with the intracellular pathogen Mycobacterium avium subsp. ***paratuberculosis*** results in a granulomatous enteritis (Johne's disease) that is often fatal. The key features of host immunity to M. avium subsp. ***paratuberculosis*** infection include an appropriate early proinflammatory and cytotoxic

response (Th1-like) that eventually gives way to a predominant antibody-based response (Th2-like).. . . this shift in the immune response occurs and the underlying molecular mechanisms involved is critical to future control measures and ***diagnosis*** . Previous studies have suggested that M. avium subsp. ***paratuberculosis*** may suppress gene expression in peripheral blood mononuclear cells (PBMCs) from infected cows, despite a continued inflammatory reaction at sites of infection. In the present study, we tested the hypothesis that exposure to M. avium subsp. ***paratuberculosis*** suppresses a proinflammatory gene expression pattern in PBMCs from infected cows. To do this, we examined expression of genes encoding ***interleukin*** -1alpha (IL-1alpha), IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p35, IL-16, and IL-18, as well as genes encoding gamma ***interferon*** (IFN-gamma), transforming growth factor beta (TGF-beta), and tumor necrosis factor alpha (TNF-alpha), in PBMCs, intestinal lesions, and mesenteric lymph nodes of cattle naturally infected with M. avium subsp. ***paratuberculosis*** . Cytokine gene expression in these cells and tissues was compared to expression in similar cells and tissues from control uninfected. . . IL-8, and IL-12p35, differential expression in PBMCs from infected and control cattle did not require stimulation with M. avium subsp. ***paratuberculosis*** . In fact, stimulation with M. avium subsp. ***paratuberculosis*** tended to reduce the differential expression observed in infected and uninfected cows for genes encoding IFN-gamma, IL-1alpha, and IL-6. Only IL-10 gene expression was consistently enhanced by M. avium subsp. ***paratuberculosis*** stimulation of PBMCs from subclinically infected cattle. In ileal tissues from M. avium subsp. ***paratuberculosis*** -infected cattle, expression of the genes encoding IFN-gamma, TGF-beta, IL-5, and IL-8 was greater than the expression in comparable tissues from. . . was lower in tissues from infected cattle than in control tissues. Mesenteric lymph nodes draining sites of M. avium subsp. ***paratuberculosis*** infection expressed higher levels of IL-1alpha, IL-8, IL-2, and IL-10 mRNA than similar tissues from control uninfected cattle expressed. In. . . cattle. Taken together, our results suggest that cells or other mechanisms capable of limiting proinflammatory responses to M. avium subsp. ***paratuberculosis*** develop in infected cattle and that a likely place for development and expansion of these cell populations is the mesenteric. . .

IT . . .
lymph node: blood and lymphatics, digestive system, immune system; peripheral blood mononuclear cell: blood and lymphatics, immune system

IT Diseases
paratuberculosis : bacterial disease, infectious disease, genetics, immunology, Johne's disease
Paratuberculosis (MeSH)

IT Chemicals & Biochemicals
proinflammatory genes: expression pattern

ORGN . . .
Vertebrates

ORGN Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium avium ssp. ***paratuberculosis*** (subspecies): pathogen

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     Taxa Notes
        Bacteria, Eubacteria, Microorganisms
GEN  cattle IFN-gamma gene [cattle   ***interferon***  -gamma gene] (Bovidae);
     cattle IL-1-alpha gene [cattle   ***interleukin***  -1-alpha gene]
     (Bovidae); cattle IL-10 gene [cattle   ***interleukin***  -10 gene]
     (Bovidae); cattle IL-12p35 gene [cattle   ***interleukin***  -12p35 gene]
     (Bovidae); cattle IL-16 gene [cattle   ***interleukin***  -16 gene]
     (Bovidae); cattle IL-18 gene [cattle   ***interleukin***  -18 gene]
     (Bovidae); cattle IL-2 gene [cattle   ***interleukin***  -2 gene]
     (Bovidae); cattle IL-4 gene [cattle   ***interleukin***  -4 gene]
     (Bovidae); cattle IL-5 gene [cattle   ***interleukin***  -5 gene]
     (Bovidae); cattle IL-6 gene [cattle   ***interleukin***  -6 gene]
     (Bovidae); cattle IL-8 gene [cattle   ***interleukin***  -8 gene]
     (Bovidae); cattle TGF-beta gene [cattle transforming growth factor-beta
     gene] (Bovidae); cattle TNF-alpha gene [cattle tumor necrosis factor-alpha
     gene] (Bovidae)

L10  ANSWER 10 OF 19  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2004:885718  CAPLUS <<LOGINID::20080325>>
DN   141:363746
TI   Development of early-stage   ***diagnostic***   method for Johne disease
     by using anti-IL-10 antibody
AU   Momotani, Eiichi; Mori, Yasuyuki
CS   Natl. Agric. Bio-oriented Res. Org., Natl. Inst. Animal Health, Tsukuba,
     305-0856, Japan
SO   BRAIN Techno News (2004), 105, 18-24
     CODEN: BTEEEC; ISSN: 1345-5958
PB   Nogyo, Seibutsukei Tokutei Sangyo Gijutsu Kenkyu Kiko, Seibutsukei Tokutei
     Sangyo Gijutsu Kenkyu Shien Senta
DT   Journal; General Review
LA   Japanese
AB   A review on early-stage   ***diagnosis***   of Johne's disease (
       ***paratuberculosis***  ) in cattle by modified   ***interferon***
     .gamma. ELISA   ***assay***   using IL-10 neutralizing antibody, and its
     effectiveness.
TI   Development of early-stage   ***diagnostic***   method for Johne disease
     by using anti-IL-10 antibody
AB   A review on early-stage   ***diagnosis***   of Johne's disease (
       ***paratuberculosis***  ) in cattle by modified   ***interferon***
     .gamma. ELISA   ***assay***   using IL-10 neutralizing antibody, and its
     effectiveness.
ST   review cattle Johne disease   ***diagnosis***   ELISA   ***interleukin***
     10 antibody;   ***paratuberculosis***   cattle   ***diagnosis***
       ***interferon***   gamma ELISA review
IT   Bos taurus
     Mycobacterium avium   ***paratuberculosis***
        (early-stage   ***diagnosis***   method for Johne's disease using
        anti-IL-10 antibody)
IT    ***Interleukin***   10
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (early-stage   ***diagnosis***   method for Johne's disease using
        anti-IL-10 antibody)
IT   Immunoassay
        (enzyme-liked immunosorbent   ***assay***  ; early-stage
          ***diagnosis***   method for Johne's disease using anti-IL-10
antibody)
IT    ***Diagnosis***
```

(immunodiagnosis; early-stage ***diagnosis*** method for Johne's disease using anti-IL-10 antibody)

IT Infection
(***paratuberculosis*** , Johne's disease; early-stage ***diagnosis*** method for Johne's disease using anti-IL-10 antibody)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(to IL-10; early-stage ***diagnosis*** method for Johne's disease using anti-IL-10 antibody)

IT ***Interferons***
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.gamma.; early-stage ***diagnosis*** method for Johne's disease using anti-IL-10 antibody)

L10 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:472526 CAPLUS <<LOGINID::20080325>>
DN 139:30816
TI Peptide T and analogs thereof for the stimulation of cytotoxic T lymphocyte (CTL) responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use
IN Ruscetti, Francis W.; Ruff, Michael R.
PA The Government of the United States of America, as Represented by the Secretary Department of Health and Human Services National Institutes of Health, USA
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003050136	A2	20030619	WO 2002-US39109	20021206
	WO 2003050136	A3	20031204		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002357093	A1	20030623	AU 2002-357093	20021206
PRAI	US 2001-338971P	P	20011207		
	WO 2002-US39109	W	20021206		

OS MARPAT 139:30816
AB The invention provides a method of increasing cytotoxic T lymphocyte (CTL) activity in a subject, comprising administering a CTL activity-stimulating amt. of peptide T or an analog thereof. A method of increasing .gamma.- ***interferon*** (IFN-.gamma.) secretion in a subject comprises administering an IFN-.gamma. secretion-increasing amt. of peptide T or an analog thereof. A method of increasing ***interleukin*** 2 (IL-2)

secretion in a subject comprises administering an IL-2 secretion-increasing amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced CTL activity comprises administering a CTL activity-stimulating amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced IFN-.gamma. activity comprises administering an IFN-.gamma. activity-stimulating amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced IL-2 activity comprises administering an IL-2 activity-stimulating amt. of peptide T or an analog thereof.

TI Peptide T and analogs thereof for the stimulation of cytotoxic T lymphocyte (CTL) responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use

AB . . . in a subject, comprising administering a CTL activity-stimulating amt. of peptide T or an analog thereof. A method of increasing .gamma.- ***interferon*** (IFN-.gamma.) secretion in a subject comprises administering an IFN-.gamma. secretion-increasing amt. of peptide T or an analog thereof. A method of increasing ***interleukin*** 2 (IL-2) secretion in a subject comprises administering an IL-2 secretion-increasing amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced CTL activity comprises administering a CTL activity-stimulating amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced IFN-.gamma. activity comprises administering an IFN-.gamma. activity-stimulating amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced IL-2 activity comprises administering an IL-2 activity-stimulating amt. of peptide T or an. . .

ST peptide T analog cytotoxic T lymphocyte response stimulation; ***interferon*** gamma secretion peptide T; ***interleukin*** 2 secretion peptide T

IT Lymphoma
(B-cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Lymphoma
(T-cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TNF-.alpha.; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(adenocarcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT AIDS (disease)
(and AIDS-related lymphoma or sarcoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Infection
(bacterial; peptide T and analogs for stimulation of cytotoxic T

lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(blastoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Urogenital system
(cancer; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Esophagus, neoplasm
Head and Neck, neoplasm
Head and Neck, neoplasm
(carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Uterus, neoplasm
(cervix, carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
Uterus, neoplasm
(cervix; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Intestine, neoplasm
(colon; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Intestine, neoplasm
(colorectal; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT T cell (lymphocyte)
(cytotoxic; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(esophageal; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Mycosis
(fungoides; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neuroglia, neoplasm
(glioblastoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
Carcinoma
(head and neck squamous cell carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
Carcinoma

(head and neck; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(histiocytoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Hypoxia
(hypoxic tumors; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Fungi
Parasite
(infection; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(laryngeal squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(metastasis; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Skin, neoplasm
(mycosis fungoides; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Histiocyte
(neoplasm, histiocytoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Nerve, neoplasm
(neuroblastoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Lymphoma
(non-Hodgkin's; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(oral squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Actinobacillus pleuropneumoniae
Adenoma
Alternaria alternata
Anti-AIDS agents
Antibacterial agents
Antimalarials
Antitumor agents
Antiviral agents
Aspergillus fumigatus

Bacillus anthracis
Bladder, neoplasm
Blastomyces dermatitidis
Brain, neoplasm
Brucella
Brucella melitensis
CD8-positive T cell
Campylobacter
Candida albicans
Carcinoma
Carcinoma
Chlamydia pneumoniae
Chlamydia trachomatis
Chlamydophila psittaci
Clostridium
Clostridium tetani
Coccidioides immitis
Coronavirus
Coxiella burnetii
Cryptococcus neoformans
Dengue virus
Eastern equine encephalitis virus
Ebola virus
Ehrlichia
Ehrlichia ruminantium
Entamoeba histolytica
Escherichia coli
Fungicides
Haemophilus
Haemophilus ducreyi
Haemophilus influenzae
Hantavirus
Hematopoietic neoplasm
Hepatitis A virus
Hepatitis B virus
Hepatitis C virus
Hepatitis E virus
Hepatitis delta virus
Histoplasma capsulatum
Hodgkin's disease
Human
Human T-lymphotropic virus 1
Human adenovirus
Human coxsackievirus
Human immunodeficiency virus
Human immunodeficiency virus 1
Human immunodeficiency virus 2
Human papillomavirus
Human poliovirus
Immunostimulants
Influenza A virus
Influenza B virus
Japanese encephalitis virus
Kidney, neoplasm
Lassa virus
Legionella
Legionella pneumophila

Leishmania
Leishmania major
Leukemia
Listeria ivanovii
Listeria monocytogenes
Liver, neoplasm
Lung, neoplasm
Lymphoma
Mammary gland, neoplasm
Mannheimia haemolytica
Marburg virus
Measles virus
Melanoma
Multiple myeloma
Mumps virus
Murray Valley encephalitis virus
Mycobacterium BCG
Mycobacterium africanum
Mycobacterium avium
Mycobacterium avium ***paratuberculosis***
Mycobacterium bovis
Mycobacterium intracellulare
Mycobacterium kansasii
Mycobacterium marinum
Mycobacterium tuberculosis
Mycobacterium ulcerans
Myeloid leukemia
Neisseria gonorrhoeae
Neisseria meningitidis
Neoplasm
Nervous system, neoplasm
Neuroglia, neoplasm
Nocardia
Nocardia asteroides
Ovary, neoplasm
Pancreas, neoplasm
Paracoccidioides brasiliensis
Parasiticides
Pasteurella
Pasteurella multocida
Penicillium marneffei
Plasmodium (malarial genus)
Plasmodium falciparum
Plasmodium malariae
Plasmodium vivax
Pneumocystis carinii
Polyomavirus
Prostate gland, neoplasm
Pseudomonas
Pseudomonas aeruginosa
Rabies virus
Respiratory syncytial virus
Rhinovirus
Rickettsia
Rift Valley fever virus
Rotavirus A
Rotavirus B

Rotavirus C
Rous sarcoma virus
Rubella virus
Salmonella
Salmonella typhi
Sarcoma
Schistosoma
Schistosoma mansoni
Shigella
Simian immunodeficiency virus
Sindbis virus
Skin, neoplasm
St. Louis encephalitis virus
Staphylococcus aureus
Staphylococcus epidermidis
Streptococcus agalactiae
Streptococcus pyogenes
Testis, neoplasm
Toxoplasma gondii
Trypanosoma brucei
Trypanosoma cruzi
Variola virus
Vesicular stomatitis virus
Vibrio cholerae
West Nile virus
Yellow fever virus
Yersinia
Yersinia enterocolitica
Yersinia pestis
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Cytokines
Interleukin 1
Interleukin 10
Interleukin 12
Interleukin 13
Interleukin 2
Interleukin 4
Interleukin 6
Interleukin 8
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Peptides, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(pulmonary squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(solid, carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT Head and Neck, neoplasm
Head and Neck, neoplasm
Larynx, neoplasm
Lung, neoplasm
Mouth, neoplasm
(squamous cell carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT Carcinoma
(squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT Pharynx, neoplasm
(throat squamous cell carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT Infection
(viral; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT ***Interferons***
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.gamma.; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT 106362-32-7D, C-terminal derivs.
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT 106362-32-7, Peptide T 106362-32-7D, Peptide T, analogs
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT 107531-09-9 107531-11-3 107531-12-4 107531-14-6 118936-25-7
118936-26-8 118936-27-9 118936-30-4 118936-31-5 118936-32-6
118957-86-1 119386-95-7
RL: PRP (Properties)
(unclaimed sequence; peptide T and analogs thereof for the stimulation of cytotoxic T lymphocyte (CTL) responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

L10 ANSWER 12 OF 19 MEDLINE on STN
AN 2002454621 MEDLINE <<LOGINID::20080325>>

DN PubMed ID: 12208110
TI Localisation of CD25+ cells and MHCII+ cells in lymph nodes draining Mycobacterium avium subsp. ***paratuberculosis*** vaccination granuloma and the presence of a systemic immune response.
AU Valheim M; Hasvold H J; Storset A K; Larsen H J S; Press C McL
CS Department of Morphology, Genetics and Aquatic Biology, Norwegian School of Veterinary Science, P.O. Box 8146 Dep. N-0033 Oslo, Norway.. mette.valheim@vetinst.no
SO Research in veterinary science, (2002 Aug) Vol. 73, No. 1, pp. 77-85. Journal code: 0401300. ISSN: 0034-5288.
CY England: United Kingdom
DT (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200305
ED Entered STN: 6 Sep 2002
Last Updated on STN: 21 May 2003
Entered Medline: 20 May 2003
AB Vaccination of goat kids against ***paratuberculosis*** protects against lesions and clinical disease. The systemic cellular response was studied in goat kids 3-9 weeks after vaccination. Peripheral blood cells showed increased ***interferon*** -gamma production and expression of ***interleukin*** -2 receptor (CD25) after stimulation with Mycobacterium avium subsp. ***paratuberculosis*** antigens. The lymph node draining the vaccination granuloma was studied three weeks after vaccination in a parallel group of goat kids. In deep cortex, MHCII+ cells were observed surrounded by CD4+ T-cells, while follicular hypertrophy and hyperplasia were prominent in the subcapsular region and along connective tissue trabecula. Comparison of the local and systemic immune responses revealed an inverse relationship between CD25+ T-cells in the lymph node deep cortex and cells in peripheral blood that up-regulate CD25 upon in vitro stimulation, suggesting that activated and regulatory T-cells in the local lymph node influence the level of circulating antigen-specific T-cells following vaccination against ***paratuberculosis*** in goats.
TI Localisation of CD25+ cells and MHCII+ cells in lymph nodes draining Mycobacterium avium subsp. ***paratuberculosis*** vaccination granuloma and the presence of a systemic immune response.
AB Vaccination of goat kids against ***paratuberculosis*** protects against lesions and clinical disease. The systemic cellular response was studied in goat kids 3-9 weeks after vaccination. Peripheral blood cells showed increased ***interferon*** -gamma production and expression of ***interleukin*** -2 receptor (CD25) after stimulation with Mycobacterium avium subsp. ***paratuberculosis*** antigens. The lymph node draining the vaccination granuloma was studied three weeks after vaccination in a parallel group of goat. . . that activated and regulatory T-cells in the local lymph node influence the level of circulating antigen-specific T-cells following vaccination against ***paratuberculosis*** in goats.
CT Check Tags: Male
Animals
Antigens, Bacterial: IM, immunology
*Bacterial Vaccines: IM, immunology
*** Enzyme-Linked Immunosorbent Assay***
Gene Expression Regulation
Goat Diseases: IM, immunology

Goat Diseases: MI, microbiology
Goat Diseases: PA, pathology
Goat Diseases:. . . IM, immunology
Goats: MI, microbiology
*Granuloma: IM, immunology
Granuloma: MI, microbiology
Granuloma: PA, pathology
*Histocompatibility Antigens Class II: IM, immunology
*** Interferon Type II: IM, immunology***
*** Interferon Type II: ME, metabolism***
Lymph Nodes: CY, cytology
*Lymph Nodes: IM, immunology
Lymph Nodes: MI, microbiology
****Mycobacterium avium subsp. paratuberculosis: IM, immunology***
*** Mycobacterium avium subsp. paratuberculosis: IP, isolation &***
*** purification***
*** Paratuberculosis: IM, immunology***
*** Paratuberculosis: MI, microbiology***
*** Paratuberculosis: PA, pathology***
*** Paratuberculosis: PC, prevention & control***
*** Receptors, Interleukin-2: AN, analysis***
****Receptors, Interleukin-2: IM, immunology***
*T-Lymphocytes: IM, immunology
RN ***82115-62-6 (Interferon Type II)***
CN 0 (Antigens, Bacterial); 0 (Bacterial Vaccines); 0 (Histocompatibility Antigens Class II); 0 (Receptors, ***Interleukin*** -2)

L10 ANSWER 13 OF 19 MEDLINE on STN
AN 2002648148 MEDLINE <<LOGINID::20080325>>
DN PubMed ID: 12406650
TI Type 1 and type 2 responses in regulation of Ig isotype expression in cattle.
AU Estes D Mark; Brown Wendy C
CS Program for the Prevention of Animal Infectious Diseases, Department of Veterinary Pathobiology, University of Missouri, Columbia, MO 65211, USA.. estesd@missouri.edu
SO Veterinary immunology and immunopathology, (2002 Nov) Vol. 90, No. 1-2, pp. 1-10. Ref: 90
Journal code: 8002006. ISSN: 0165-2427.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 200305
ED Entered STN: 31 Oct 2002
Last Updated on STN: 3 May 2003
Entered Medline: 2 May 2003
AB Regulation of humoral immune responses is multifactorial involving appropriate activation, costimulation and the presence of specific soluble factors. Polarized type 1 or type 2 humoral responses in the laboratory mouse have been linked to expression of specific cytokines and thus can be used to provide insight into the type of response generated by infection. For example, IFN-gamma has been linked to IgG2a and IgG3 production, IL-4 to IgG1 and IgE production and TGF-beta to IgA production. Unlike the laboratory mouse, generally housed under defined conditions, highly skewed isotype expression patterns generally occur in cattle in chronic

infections. A few examples of polarized responses have been noted in chronic experimental or naturally occurring infections including F. hepatica, M. ***paratuberculosis*** , C. parvum and B. abortus. In vitro studies using purified bovine B cells and various forms of costimulation and cytokines have demonstrated that isotype responses can be polarized under certain experimental conditions in vitro. That is, IgG1 expression is positively regulated by IL-4 and IgG2 expression is positively regulated by IFN-gamma. Other as yet unidentified factors may play pivotal roles in regulating humoral immune responses in large ruminant species in vivo. This possibility is best exemplified by recent studies using DNA vaccines in cattle that have been demonstrated in the mouse to be generally polarizing to a type 1 response. Surprisingly, studies in cattle using plasmid DNA as vaccination material show an almost exclusive IgG1 response. Based on a number of studies using T cell clones and various biological ***assays*** , it is clear that the classical roles of many cytokines in the laboratory mouse do not extrapolate entirely or at all to cattle. Thus, the design of adjuvants and immune modulators should be based on studies done in cattle or using bovine cells. Based on studies to date, several "holes" in the cytokine repertoire exist and these roles may be assumed by unique factors or activities of other known cytokines.

AB . . . A few examples of polarized responses have been noted in chronic experimental or naturally occurring infections including F. hepatica, M. ***paratuberculosis*** , C. parvum and B. abortus. In vitro studies using purified bovine B cells and various forms of costimulation and cytokines. . . material show an almost exclusive IgG1 response. Based on a number of studies using T cell clones and various biological ***assays*** , it is clear that the classical roles of many cytokines in the laboratory mouse do not extrapolate entirely or at. . .

CT Animals
*Cattle: IM, immunology
*Gene Expression Regulation
*Immunoglobulin Isotypes: GE, genetics
*** Interferon Type II: IM, immunology***
*** Interleukins: IM, immunology***
*Th1 Cells: IM, immunology
*Th2 Cells: IM, immunology
Transforming Growth Factor beta: IM, immunology

RN ***82115-62-6 (Interferon Type II)***

CN 0 (Immunoglobulin Isotypes); 0 (***Interleukins***); 0 (Transforming Growth Factor beta)

L10 ANSWER 14 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

AN 2001:570180 BIOSIS <<LOGINID::20080325>>

DN PREV200100570180

TI Results of multiple ***diagnostic*** tests for Mycobacterium avium subsp. ***paratuberculosis*** in patients with inflammatory bowel disease and in controls.

AU Collins, Michael T. [Reprint author]; Lisby, Gorm; Moser, Claus; Chicks, Debra; Christensen, Steen; Reichelderfer, Mark; Hoiby, Niels; Harms, Bruce A.; Thomsen, Ole O.; Skibsted, Ulrik; Binder, Vibeke

CS Department of Pathobiological Sciences, School of Veterinary Medicine, 2015 Linden Dr. West, Madison, WI, 53706-1102, USA
mcollin5@facstaff.wisc.edu

SO Journal of Clinical Microbiology, (December, 2001) Vol. 38, No. 12, pp. 4373-4381. print.

CODEN: JCMIDW. ISSN: 0095-1137.
DT Article
LA English
ED Entered STN: 12 Dec 2001
Last Updated on STN: 25 Feb 2002
AB Mycobacterium avium subsp. ***paratuberculosis*** has been incriminated as a cause of Crohn's disease (CD); however, studies to date have been relatively small and generally only used a single ***diagnostic*** ***assay*** . The objective of the study was to reexamine the association of M. avium subsp. ***paratuberculosis*** and CD using multiple ***diagnostic*** tests. Five methods were used to detect M. avium subsp. ***paratuberculosis*** infections in 439 inflammatory bowel disease (IBD) patients and 324 control subjects in the United States and Denmark. Most ***assays*** were adaptations of ***diagnostic*** tests for this infection performed routinely on animals. PCR for IS900, a genetic element unique to M. avium subsp. ***paratuberculosis*** , was positive significantly more often on resected bowel and lymph node tissues from CD patients (19.0%) and ulcerative colitis (UC) patients (26.2%) than from controls (6.3%) (P<0.05). Positive IS900 PCR results occurred more often in U.S. than in Danish IBD patients, 32.0 versus 13.3% (P=0.025). The majority of Danish patients were bacillus Calmette-Guerin (Mycobacterium bovis BCG) vaccinated (CD, 77.5%; UC, 86.6%; controls, 83.0%) whereas none of the U.S. patients with IBD and only 2% of U.S. controls were vaccinated. Among Danish IBD patients, positive PCR findings were four times more common among subjects who were not BCG vaccinated (33.3%) than among BCG vaccinates (8.8%, P=0.02). Culture of the same tissues tested by PCR using modified BACTEC 12B medium failed to grow M. avium subsp. ***paratuberculosis*** from patients or controls. U.S. CD patients had the highest serological evidence (enzyme-linked immunosorbent ***assay*** (ELISA) for serum antibodies) of M. avium subsp. ***paratuberculosis*** infection (20.7% of patients positive) which was higher than for all UC patients studied (6.1%) or healthy controls (3.8%, P<0.005). Among Danish patients alone, however, no significant differences in rates of ELISA-positive results among CD, UC, or control patients were found. For 181 study subjects, both IS900 PCR and ELISA were performed. Although 11 were ELISA positive and 36 were PCR positive, in no instance was a patient positive by both tests, suggesting that these states are mutually exclusive. Evaluation of cytokine-mediated immune responses of IBD patients was complicated by the influence of immunosuppressive therapy given most IBD patients. Gamma ***interferon*** (IFN-gamma) release by peripheral blood leukocytes after M. avium purified protein derivative PPD antigen stimulation showed significantly lower responses in CD patients than in UC patients or controls in both U.S. (by ex vivo ***assay***) and Danish (by in vitro ***assay***) populations (P<0.05). ***Interleukin*** -5 responses were not different among CD, UC, or control groups. Collectively, the PCR, ELISA, and IFN-gamma tests for M. avium subsp. ***paratuberculosis*** together with the unexpected observation that BCG vaccination influenced M. avium subsp. ***paratuberculosis*** detection, lead us to conclude that M. avium subsp. ***paratuberculosis*** , or some similarly fastidious mycobacterial species, infects at least a subset of IBD patients. Whether the infection is primary (causal) or secondary, it may contribute to the etiopathogenesis of IBD.

TI Results of multiple ***diagnostic*** tests for Mycobacterium avium subsp. ***paratuberculosis*** in patients with inflammatory bowel disease and in controls.

AB Mycobacterium avium subsp. ***paratuberculosis*** has been incriminated as a cause of Crohn's disease (CD); however, studies to date have been relatively small and generally only used a single ***diagnostic*** ***assay*** . The objective of the study was to reexamine the association of M. avium subsp. ***paratuberculosis*** and CD using multiple ***diagnostic*** tests. Five methods were used to detect M. avium subsp. ***paratuberculosis*** infections in 439 inflammatory bowel disease (IBD) patients and 324 control subjects in the United States and Denmark. Most ***assays*** were adaptations of ***diagnostic*** tests for this infection performed routinely on animals. PCR for IS900, a genetic element unique to M. avium subsp. ***paratuberculosis*** , was positive significantly more often on resected bowel and lymph node tissues from CD patients (19.0%) and ulcerative colitis (UC). . . P=0.02). Culture of the same tissues tested by PCR using modified BACTEC 12B medium failed to grow M. avium subsp. ***paratuberculosis*** from patients or controls. U.S. CD patients had the highest serological evidence (enzyme-linked immunosorbent ***assay*** (ELISA) for serum antibodies) of M. avium subsp. ***paratuberculosis*** infection (20.7% of patients positive) which was higher than for all UC patients studied (6.1%) or healthy controls (3.8%, P<0.005).. . . of cytokine-mediated immune responses of IBD patients was complicated by the influence of immunosuppressive therapy given most IBD patients. Gamma ***interferon*** (IFN-gamma) release by peripheral blood leukocytes after M. avium purified protein derivative PPD antigen stimulation showed significantly lower responses in CD patients than in UC patients or controls in both U.S. (by ex vivo ***assay***) and Danish (by in vitro ***assay***) populations (P<0.05). ***Interleukin*** -5 responses were not different among CD, UC, or control groups. Collectively, the PCR, ELISA, and IFN-gamma tests for M. avium subsp. ***paratuberculosis*** together with the unexpected observation that BCG vaccination influenced M. avium subsp. ***paratuberculosis*** detection, lead us to conclude that M. avium subsp. ***paratuberculosis*** , or some similarly fastidious mycobacterial species, infects at least a subset of IBD patients. Whether the infection is primary (causal). . .

IT . . .
system disease
Crohn Disease (MeSH)

IT Diseases
inflammatory bowel disease: digestive system disease
Inflammatory Bowel Diseases (MeSH)

IT Chemicals & Biochemicals
IFN-gamma [***interferon*** -gamma]; PPD antigen

IT Methods & Equipment
ELISA: analytical method, labeling; PCR [polymerase chain reaction]: DNA amplification, ***diagnostic*** method, in situ recombinant gene expression detection, sequencing techniques

ORGN . . .
Vertebrates

ORGN Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium avium ssp. ***paratuberculosis*** : pathogen
Mycobacterium bovis: pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L10 ANSWER 15 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 5
AN 2001:410237 BIOSIS <<LOGINID::20080325>>
DN PREV20010410237
TI Subclinical ***paratuberculosis*** in goats following experimental infection: An immunological and microbiological study.
AU Storset, A. K. [Reprint author]; Hasvold, H. J.; Valheim, M.; Brun-Hansen, H.; Berntsen, G.; Whist, S. K.; Djonne, B.; Press, C. McL.; Holstad, G.; Larsen, H. J. S.
CS Department of Pharmacology, Microbiology and Food Hygiene, Norwegian School of Veterinary Science, N-0033, Oslo, Norway
anne.storset@veths.no
SO Veterinary Immunology and Immunopathology, (10 August, 2001) Vol. 80, No. 3-4, pp. 271-287. print.
CODEN: VIIMDS. ISSN: 0165-2427.
DT Article
LA English
ED Entered STN: 29 Aug 2001
Last Updated on STN: 22 Feb 2002
AB An experimental oral infection of goats with a caprine isolate of Mycobacterium a. subsp. ***paratuberculosis*** was used to investigate immunological and bacteriological events during the subclinical phase of infection. Seven goats at 5-8 weeks of age were given a bacterial suspension in milk-replacement three times weekly for 9 weeks. Six animals were kept as controls. Cellular recall responses against M. a. ***paratuberculosis*** were analysed by means of a lymphocyte proliferation test, an IFN-gamma ***assay*** and an IL-2 receptor ***assay*** . All inoculated animals had detectable CMI responses from 9 weeks post-inoculation and through the 2 years of study, although the responses were highest during the first year. Antibodies against M. a. ***paratuberculosis*** could be detected from weeks 15-20 in four of the seven animals, and one additional animal became antibody positive at week 35, while two inoculated animals did not produce significant antibody titres during the experiment. At about 1-year post-inoculation, two animals became faecal shedders, while two others started to excrete bacteria into faeces about 2 years post-inoculation. The appearance of M. a. ***paratuberculosis*** in faeces was not associated with a decline in cellular responses as far as could be assessed using the current methods for measuring CMI. Pathological lesions due to M. a. ***paratuberculosis*** infection and presence of bacteria were recorded in the intestine and/or mesenteric lymph nodes of five animals while lymph node changes suggestive of ***paratuberculosis*** were observed in one animal. Only the two animals with no signs of an active infection at necropsy showed a considerable decline in the cellular parameters during the last year of the study, particularly in the IFN-gamma ***assay*** . The two animals with the highest levels of M. a. ***paratuberculosis*** responsive CD8+ lymphocytes in the circulation about 1-year post-inoculation had no detectable lesions in the distal ileum and colon at necropsy, while high numbers of gammadelta T-cells responsive to M. a.

paratuberculosis in the circulation were associated with disseminated lesions in the distal ileum and colon.

TI Subclinical ***paratuberculosis*** in goats following experimental infection: An immunological and microbiological study.

AB An experimental oral infection of goats with a caprine isolate of Mycobacterium a. subsp. ***paratuberculosis*** was used to investigate immunological and bacteriological events during the subclinical phase of infection. Seven goats at 5-8 weeks of. . . in milk-replacement three times weekly for 9 weeks. Six animals were kept as controls. Cellular recall responses against M. a. ***paratuberculosis*** were analysed by means of a lymphocyte proliferation test, an IFN-gamma ***assay*** and an IL-2 receptor ***assay*** . All inoculated animals had detectable CMI responses from 9 weeks post-inoculation and through the 2 years of study, although the responses were highest during the first year. Antibodies against M. a. ***paratuberculosis*** could be detected from weeks 15-20 in four of the seven animals, and one additional animal became antibody positive at. . . faecal shedders, while two others started to excrete bacteria into faeces about 2 years post-inoculation. The appearance of M. a. ***paratuberculosis*** in faeces was not associated with a decline in cellular responses as far as could be assessed using the current methods for measuring CMI. Pathological lesions due to M. a. ***paratuberculosis*** infection and presence of bacteria were recorded in the intestine and/or mesenteric lymph nodes of five animals while lymph node changes suggestive of ***paratuberculosis*** were observed in one animal. Only the two animals with no signs of an active infection at necropsy showed a considerable decline in the cellular parameters during the last year of the study, particularly in the IFN-gamma ***assay*** . The two animals with the highest levels of M. a. ***paratuberculosis*** responsive CD8+ lymphocytes in the circulation about 1-year post-inoculation had no detectable lesions in the distal ileum and colon at necropsy, while high numbers of gammadelta T-cells responsive to M. a. ***paratuberculosis*** in the circulation were associated with disseminated lesions in the distal ileum and colon.

IT . . .
digestive system; lymphocyte: blood and lymphatics, immune system; mesenteric lymph node: blood and lymphatics, digestive system, immune system

IT Diseases
paratuberculosis : bacterial disease, subclinical
Paratuberculosis (MeSH)

IT Chemicals & Biochemicals
IFN-gamma [***interferon*** -gamma]; IL-2 receptor [***interleukin*** -2 receptor]

IT Methods & Equipment
IFN-gamma ***assay*** : analytical method; ***interleukin*** -2 receptor ***assay*** : analytical method; lymphocyte proliferation test: analytical method; necropsy: analytical method

IT Miscellaneous Descriptors
cellular immunity

ORGN . . .
Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium avium ***paratuberculosis*** : pathogen
Taxa Notes
Bacteria, Eubacteria, Microorganisms

L10 ANSWER 16 OF 19 LIFESCI COPYRIGHT 2008 CSA on STN DUPLICATE 6
AN 2001:53334 LIFESCI <<LOGINID::20080325>>
TI Results of Multiple ***Diagnostic*** Tests for Mycobacterium avium subsp. ***paratuberculosis*** in Patients with Inflammatory Bowel Disease and in Controls
AU Collins*, M.T.; Lisby, G.; Moser, C.; Chicks, D.; Christensen, S.; Reichelderfer, M.; Hoeiby, N.; Harms, B.A.; Thomsen, O.O.; Skibsted, U.; Binder, V.
CS Department of Pathobiological Sciences, School of Veterinary Medicine, 2015 Linden Dr. West, Madison, WI 53706-1102; E-mail: mcollin5@facstaff.wisc.edu
SO Journal of Clinical Microbiology [J. Clin. Microbiol.], (20001200) vol. 38, no. 12, pp. 4373-4381.
ISSN: 0095-1137.
DT Journal
FS J; A
LA English
SL English
AB Mycobacterium avium subsp. ***paratuberculosis*** has been incriminated as a cause of Crohn's disease (CD); however, studies to date have been relatively small and generally only used a single ***diagnostic*** ***assay*** . The objective of the study was to reexamine the association of M. avium subsp. ***paratuberculosis*** and CD using multiple ***diagnostic*** tests. Five methods were used to detect Mavium subsp. ***paratuberculosis*** infections in 439 inflammatory bowel disease (IBD) patients and 324 control subjects in the United States and Denmark. Most ***assays*** were adaptations of ***diagnostic*** tests for this infection performed routinely on animals. PCR for IS900, a genetic element unique to M. avium subsp. ***paratuberculosis*** , was positive significantly more often on resected bowel and lymph node tissues from CD patients (19.0%) and ulcerative colitis (UC) patients (26.2%) than from controls (6.3%) ($P < 0.05$). Positive IS900 PCR results occurred more often in U.S. than in Danish IBD patients, 32.0 versus 13.3% ($P = 0.025$). The majority of Danish patients were bacillus Calmette-Guerin (Mycobacterium bovis BCG) vaccinated (CD, 77.5%; UC, 86.6%; controls, 83.0%) whereas none of the U.S. patients with IBD and only 2% of U.S. controls were vaccinated. Among Danish IBD patients, positive PCR findings were four times more common among subjects who were not BCG vaccinated (33.3%) than among BCG vaccinates (8.8%, $P = 0.02$). Culture of the same tissues tested by PCR using modified BACTEC 12B medium failed to grow M. avium subsp. ***paratuberculosis*** from patients or controls. U.S. CD patients had the highest serological evidence (enzyme-linked immunosorbent ***assay*** [ELISA] for serum antibodies) of M. avium subsp. ***paratuberculosis*** infection (20.7% of patients positive) which was higher than for all UC patients studied (6.1%) or healthy controls (3.8%, $P < 0.005$). Among Danish patients alone, however, no significant differences in rates of ELISA-positive results among CD, UC, or control patients were found. For 181study subjects, both IS900 PCR and ELISA were performed. Although 11 were ELISA positive and 36 were PCR positive, in no instance was a patient positive by both tests, suggesting that these states are mutually exclusive. Evaluation of cytokine-mediated immune

responses of IBD patients was complicated by the influence of immunosuppressive therapy given most IBD patients. Gamma ***interferon*** (IFN- gamma) release by peripheral blood leukocytes after M. avium purified protein derivative PPD antigen stimulation showed significantly lower responses in CD patients than in UC patients or controls in both U.S. (by ex vivo ***assay***) and Danish (by in vitro ***assay***) populations (P < 0.05). ***Interleukin*** -5 responses were not different among CD, UC, or control groups. Collectively, the PCR, ELISA, and IFN- gamma tests for M. avium subsp. ***paratuberculosis*** together with the unexpected observation that BCG vaccination influenced M. avium subsp. ***paratuberculosis*** detection, lead us to conclude that M. avium subsp. ***paratuberculosis*** , or some similarly fastidious mycobacterial species, infects at least a subset of IBD patients. Whether the infection is primary (causal) or secondary, it may contribute to the etiopathogenesis of IBD.

TI Results of Multiple ***Diagnostic*** Tests for Mycobacterium avium subsp. ***paratuberculosis*** in Patients with Inflammatory Bowel Disease and in Controls

AB Mycobacterium avium subsp. ***paratuberculosis*** has been incriminated as a cause of Crohn's disease (CD); however, studies to date have been relatively small and generally only used a single ***diagnostic*** ***assay*** . The objective of the study was to reexamine the association of M. avium subsp. ***paratuberculosis*** and CD using multiple ***diagnostic*** tests. Five methods were used to detect Mavium subsp. ***paratuberculosis*** infections in 439 inflammatory bowel disease (IBD) patients and 324 control subjects in the United States and Denmark. Most ***assays*** were adaptations of ***diagnostic*** tests for this infection performed routinely on animals. PCR for IS900, a genetic element unique to M. avium subsp. ***paratuberculosis*** , was positive significantly more often on resected bowel and lymph node tissues from CD patients (19.0%) and ulcerative colitis (UC). . . 0.02). Culture of the same tissues tested by PCR using modified BACTEC 12B medium failed to grow M. avium subsp. ***paratuberculosis*** from patients or controls. U.S. CD patients had the highest serological evidence (enzyme-linked immunosorbent ***assay*** [ELISA] for serum antibodies) of M. avium subsp. ***paratuberculosis*** infection (20.7% of patients positive) which was higher than for all UC patients studied (6.1%) or healthy controls (3.8%, P. . . of cytokine-mediated immune responses of IBD patients was complicated by the influence of immunosuppressive therapy given most IBD patients. Gamma ***interferon*** (IFN- gamma) release by peripheral blood leukocytes after M. avium purified protein derivative PPD antigen stimulation showed significantly lower responses in CD patients than in UC patients or controls in both U.S. (by ex vivo ***assay***) and Danish (by in vitro ***assay***) populations (P < 0.05). ***Interleukin*** -5 responses were not different among CD, UC, or control groups. Collectively, the PCR, ELISA, and IFN- gamma tests for M. avium subsp. ***paratuberculosis*** together with the unexpected observation that BCG vaccination influenced M. avium subsp. ***paratuberculosis*** detection, lead us to conclude that M. avium subsp. ***paratuberculosis*** , or some similarly fastidious mycobacterial species, infects at least a subset of IBD patients. Whether the infection is primary (causal). . .

UT Bactec test; BCG; Enzyme-linked immunosorbent ***assay*** ; Polymerase chain reaction; ***Diagnostic*** agents; Inflammatory bowel diseases; Crohn's disease; USA; Denmark; Mycobacterium avium

paratuberculosis ; tests; man

L10 ANSWER 17 OF 19 MEDLINE on STN
AN 2001023445 MEDLINE <<LOGINID::20080325>>
DN PubMed ID: 10895895
TI Cytokine secretion by peripheral blood mononuclear cells from cows infected with Mycobacterium ***paratuberculosis*** .
AU Stabel J R
CS Bacterial Diseases of Livestock Research Unit, USDA-Agricultural Research Services, National Animal Disease Center, Ames, IA 50010, USA.
SO American journal of veterinary research, (2000 Jul) Vol. 61, No. 7, pp. 754-60.
Journal code: 0375011. ISSN: 0002-9645.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200011
ED Entered STN: 22 Mar 2001
Last Updated on STN: 22 Mar 2001
Entered Medline: 3 Nov 2000
AB OBJECTIVE: To compare cytokine secretion patterns of peripheral blood mononuclear cells (PBMC) from healthy cows and cows subclinically and clinically infected with Mycobacterium ***paratuberculosis*** . ANIMALS: 5 noninfected cows, 6 cows with subclinical ***paratuberculosis*** , and 4 cows with clinical ***paratuberculosis*** . PROCEDURE: PBMC were isolated, and concentrations or activities of secreted ***interleukin*** (IL)-1, IL-2, IL-6, tumor necrosis factor (TNF), and ***interferon*** -gamma (IFN-gamma) were measured after in vitro stimulation of cells with concanavalin A (ConA), lipopolysaccharide (LPS), or a whole-cell sonicate of M ***paratuberculosis*** (MpS). Proliferative responses of PBMC were also determined after stimulation with ConA, phytohemagglutinin, pokeweed mitogen (PWM), or MpS. RESULTS: After stimulation with ConA, cells from subclinically infected cows secreted significantly more, and cells from clinically infected cows secreted significantly less, IFN-gamma, compared with cells from control cows. Cells from cows with subclinical ***paratuberculosis*** produced significantly more TNF and IFN-gamma in response to MpS than cells from the other 2 groups. Stimulation of PBMC from subclinically infected cows with ConA or MpS resulted in significantly higher proliferative responses, compared with cells from control and clinically infected cows. In contrast, clinically infected cows had significantly higher proliferative responses to PWM than cells from the other 2 groups. CONCLUSIONS AND CLINICAL RELEVANCE: A decrease in T-cell responses to mitogens or MpS was observed in cows clinically infected with M ***paratuberculosis*** , compared with subclinically infected cows, suggesting that activated T cells may delay the progression of ***paratuberculosis*** .
TI Cytokine secretion by peripheral blood mononuclear cells from cows infected with Mycobacterium ***paratuberculosis*** .
AB . . . cytokine secretion patterns of peripheral blood mononuclear cells (PBMC) from healthy cows and cows subclinically and clinically infected with Mycobacterium ***paratuberculosis*** . ANIMALS: 5 noninfected cows, 6 cows with subclinical ***paratuberculosis*** , and 4 cows with clinical ***paratuberculosis*** . PROCEDURE: PBMC were isolated, and concentrations or activities of secreted ***interleukin*** (IL)-1, IL-2, IL-6, tumor necrosis factor (TNF), and ***interferon*** -gamma

(IFN-gamma) were measured after in vitro stimulation of cells with concanavalin A (ConA), lipopolysaccharide (LPS), or a whole-cell sonicate of M ***paratuberculosis*** (MpS). Proliferative responses of PBMC were also determined after stimulation with ConA, phytohemagglutinin, pokeweed mitogen (PWM), or MpS. RESULTS: After. . . cells from clinically infected cows secreted significantly less, IFN-gamma, compared with cells from control cows. Cells from cows with subclinical ***paratuberculosis*** produced significantly more TNF and IFN-gamma in response to MpS than cells from the other 2 groups. Stimulation of PBMC. . . AND CLINICAL RELEVANCE: A decrease in T-cell responses to mitogens or MpS was observed in cows clinically infected with M ***paratuberculosis*** , compared with subclinically infected cows, suggesting that activated T cells may delay the progression of ***paratuberculosis*** .

CT . . .
*Cattle Diseases: IM, immunology
Cattle Diseases: MI, microbiology
Cell Division
Concanavalin A: IM, immunology
Cytokines: AN, analysis
*Cytokines: SE, secretion
*** Enzyme-Linked Immunosorbent Assay: VE, veterinary***
*** Interferon Type II: AN, analysis***
*** Interleukin-1: AN, analysis***
*** Interleukin-2: AN, analysis***
Leukocytes, Mononuclear: IM, immunology
*Leukocytes, Mononuclear: SE, secretion
Lipopolysaccharides: IM, immunology
Lymphocyte Activation
****Mycobacterium avium subsp. paratuberculosis: IM, immunology***
*** Mycobacterium avium subsp. paratuberculosis: PY, pathogenicity***
*** Paratuberculosis: BL, blood***
****Paratuberculosis: IM, immunology***
*** Paratuberculosis: MI, microbiology***
Phytohemagglutinins: IM, immunology
Pokeweed Mitogens: IM, immunology
Scintillation Counting: VE, veterinary
RN 11028-71-0 (Concanavalin A); ***82115-62-6 (Interferon Type II)***
CN 0 (Cytokines); 0 (***Interleukin*** -1); 0 (***Interleukin*** -2); 0 (Lipopolysaccharides); 0 (Phytohemagglutinins); 0 (Pokeweed Mitogens)

L10 ANSWER 18 OF 19 MEDLINE on STN
AN 1999314910 MEDLINE <<LOGINID::20080325>>
DN PubMed ID: 10438314
TI ***Interferon*** -gamma and ***interleukin*** -2 release by lymphocytes derived from the blood, mesenteric lymph nodes and intestines of normal sheep and those affected with ***paratuberculosis*** (Johne's disease).
AU Burrells C; Clarke C J; Colston A; Kay J M; Porter J; Little D; Sharp J M
CS Moredun Research Institute, International Research Centre, Bush Loan, Penicuik, UK.. charles.burrells@cultor.com
SO Veterinary immunology and immunopathology, (1999 May) Vol. 68, No. 2-4, pp. 139-48.
Journal code: 8002006. ISSN: 0165-2427.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)

LA English
FS Priority Journals; AIDS
EM 199908
ED Entered STN: 16 Aug 1999
Last Updated on STN: 16 Aug 1999
Entered Medline: 3 Aug 1999
AB This study sought to determine if T-cell cytokine responses to mycobacterial infections in sheep were similar to those in other species and if such responses correlated with prevailing gut pathology. Lymphocytes were isolated from the blood (PBL), mesenteric lymph nodes (MLN) and ileal lamina propria (LPL) of control sheep and of sheep with clinical Johne's disease due to infection with Mycobacterium avium ssp. ***paratuberculosis*** (M.a. ***paratuberculosis***). These animals had previously been categorised into two groups exhibiting either the 'tuberculoid' (paucibacillary) form of lesion or the 'lepromatous' (multibacillary) form. Lymphocytes were examined for their capacity, following stimulation with johnin-PPD, to release ***interferon*** -gamma (IFN-gamma) and ***interleukin*** 2 (IL-2) characteristic of the Th1 subset of MHC Class II-restricted CD4+ (helper) T-cells in other species. The expression of the two cytokines appeared related to the type of histological lesion observed. Antigen-stimulated lymphocytes from the tuberculoid group exhibited greater release of IFN-gamma and IL-2 than lymphocytes from the lepromatous group suggesting a Th1-type of response in the former in which expression of IFN-gamma by PBL showed a significant positive correlation with that expressed by MLN and LPL. Lymphocytes from animals with lepromatous lesions released lesser mycobacterium-induced IFN-gamma and IL-2 indicating a diminished role for a Th1 subset in this group of sheep. Differences in cytokine expression were much more apparent with lymphocytes which were derived from MLN.
TI ***Interferon*** -gamma and ***interleukin*** -2 release by lymphocytes derived from the blood, mesenteric lymph nodes and intestines of normal sheep and those affected with ***paratuberculosis*** (Johne's disease).
AB . . . lamina propria (LPL) of control sheep and of sheep with clinical Johne's disease due to infection with Mycobacterium avium ssp. ***paratuberculosis*** (M.a. ***paratuberculosis***). These animals had previously been categorised into two groups exhibiting either the 'tuberculoid' (paucibacillary) form of lesion or the 'lepromatous' (multibacillary) form. Lymphocytes were examined for their capacity, following stimulation with johnin-PPD, to release ***interferon*** -gamma (IFN-gamma) and ***interleukin*** 2 (IL-2) characteristic of the Th1 subset of MHC Class II-restricted CD4+ (helper) T-cells in other species. The expression of. . .
CT Check Tags: Female
Animals
*** Enzyme-Linked Immunosorbent Assay: VE, veterinary***
Ileum
****Interferon Type II: BI, biosynthesis***
****Interleukin-2: BI, biosynthesis***
Lymph Nodes: CY, cytology
*Lymph Nodes: ME, metabolism
Lymphocyte Activation
Mesentery
****Paratuberculosis: ME, metabolism***
Sheep

*Sheep Diseases: ME, metabolism
*Th1 Cells: ME, metabolism
RN ***82115-62-6 (Interferon Type II)***
CN 0 (***Interleukin*** -2)

L10 ANSWER 19 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 7
AN 1998:363991 BIOSIS <<LOGINID::20080325>>
DN PREV199800363991
TI ***Interferon*** -gamma and ***interleukin*** 4 gene expression in cows infected with Mycobacterium ***paratuberculosis*** .
AU Sweeney, Raymond W. [Reprint author]; Jones, Douglas E.; Habecker, Perry; Scott, Phillip
CS Dep. Clinical Studies-New Bolton Cent., Sch. Veterinary Med., Univ. Pennsylvania, 382 W. Street Rd., Kennett Square, PA 19348, USA
SO American Journal of Veterinary Research, (July, 1998) Vol. 59, No. 7, pp. 842-847. print.
CODEN: AJVRAH. ISSN: 0002-9645.
DT Article
LA English
ED Entered STN: 27 Aug 1998
Last Updated on STN: 27 Aug 1998
AB Objective-To determine whether clinical progression of ***paratuberculosis*** in cattle was associated with alterations in cytokine gene expression in affected tissues. Animals-5 uninfected adult Holstein cows, 7 adult Holstein cows naturally infected with Mycobacterium ***paratuberculosis*** that did not have clinical signs of disease, and 4 adult Holstein cows naturally infected with M. ***paratuberculosis*** that had progressive clinical signs of infection. Procedure-Samples of ileum and cecal lymph nodes were obtained from each animal at the time of slaughter. A reverse transcriptase-competitive polymerase chain reaction ***assay*** was used to determine mRNA expression of ***interferon*** -gamma (IFN-gamma) and ***interleukin*** 4 in each sample. Results- ***Interferon*** -gamma gene expression was significantly higher in ileum and cecal lymph node samples from subclinically infected cows than from clinically infected cows. Conclusions and Clinical Relevance-Progression of ***paratuberculosis*** to clinical stages is associated with reduced expression of IFN-gamma at site of infection. If immune response to M. ***paratuberculosis*** can be manipulated so that IFN-gamma expression is increased, resistance to infection in cattle might be enhanced.
TI ***Interferon*** -gamma and ***interleukin*** 4 gene expression in cows infected with Mycobacterium ***paratuberculosis*** .
AB Objective-To determine whether clinical progression of ***paratuberculosis*** in cattle was associated with alterations in cytokine gene expression in affected tissues. Animals-5 uninfected adult Holstein cows, 7 adult Holstein cows naturally infected with Mycobacterium ***paratuberculosis*** that did not have clinical signs of disease, and 4 adult Holstein cows naturally infected with M. ***paratuberculosis*** that had progressive clinical signs of infection. Procedure-Samples of ileum and cecal lymph nodes were obtained from each animal at the time of slaughter. A reverse transcriptase-competitive polymerase chain reaction ***assay*** was used to determine mRNA expression of ***interferon*** -gamma (IFN-gamma) and ***interleukin*** 4 in each sample. Results- ***Interferon*** -gamma gene expression was significantly higher in ileum

and cecal lymph node samples from subclinically infected cows than from clinically infected cows. Conclusions and Clinical Relevance—Progression of ***paratuberculosis*** to clinical stages is associated with reduced expression of IFN-gamma at site of infection. If immune response to M. ***paratuberculosis*** can be manipulated so that IFN-gamma expression is increased, resistance to infection in cattle might be enhanced.

IT Major Concepts
Immune System (Chemical Coordination and Homeostasis); Infection; Veterinary Medicine (Medical Sciences)

IT Diseases
Mycobacterium- ***paratuberculosis*** infection: bacterial disease
Mycobacterium Infections (MeSH)

IT Chemicals & Biochemicals
interferon -gamma: gene expression; ***interleukin*** -4: gene expression

ORGN . . .
Vertebrates, Nonhuman Mammals, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium- ***paratuberculosis*** : pathogen

Taxa Notes
Bacteria, Eubacteria, Microorganisms

=> s l10 and (interleukin 10)
L11 7 L10 AND (INTERLEUKIN 10)

=> d 1-
YOU HAVE REQUESTED DATA FROM 7 ANSWERS - CONTINUE? Y/(N):y

L11 ANSWER 1 OF 7 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 2006:496945 BIOSIS <<LOGINID::20080325>>
DN PREV200600503265
TI Disturbed cytokine response to mycobacterium avium subspecies ***paratuberculosis*** is dysregulated in patients with Crohn's disease.
AU Sibartie, Shomik; Keohane, John; Scully, Paul; O'Neill, Shaun; O'Mahony, Jim; O'Mahony, Liam; Shanahan, Fergus
SO Gastroenterology, (APR 2006) Vol. 130, No. 4, Suppl. 2, pp. A240. Meeting Info.: Digestive Disease Week Meeting/107th Annual Meeting of the American-Gastroenterological-Association. Los Angeles, CA, USA. May 19 -24, 2006. Amer Gastroenterol Assoc Inst.
CODEN: GASTAB. ISSN: 0016-5085.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 4 Oct 2006
Last Updated on STN: 4 Oct 2006

L11 ANSWER 2 OF 7 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
AN 2004:178760 BIOSIS <<LOGINID::20080325>>
DN PREV200400179647

TI Cytokine gene expression in peripheral blood mononuclear cells and tissues of cattle infected with Mycobacterium avium subsp. ***paratuberculosis*** : Evidence for an inherent proinflammatory gene expression pattern.
AU Coussens, Paul M. [Reprint Author]; Verman, Nitin; Coussens, Marc A.; Elftman, Michael D.; McNulty, Amanda M.
CS Department of Animal Science, Michigan State University, 1205H Anthony Hall, East Lansing, MI, 48824, USA
coussens@msu.edu
SO Infection and Immunity, (March 2004) Vol. 72, No. 3, pp. 1409-1422. print.
ISSN: 0019-9567 (ISSN print).
DT Article
LA English
ED Entered STN: 31 Mar 2004
Last Updated on STN: 31 Mar 2004

L11 ANSWER 3 OF 7 CABA COPYRIGHT 2008 CABI on STN
AN 2006:49179 CABA <<LOGINID::20080325>>
DN 20063031176
TI Inflammatory cytokine gene expression in different types of granulomatous lesions during asymptomatic stages of bovine ***paratuberculosis***
AU Tanaka, S.; Sato, M.; Onitsuka, T.; Kamata, H.; Yokomizo, Y.
CS Comparative Pathology Section, Kyushu Research Station, National Institute of Animal Health, Chuzan-cho 2702, Kagoshima 891-0105, Japan.
tanakas@affrc.go.jp
SO Veterinary Pathology, (2005) Vol. 42, No. 5, pp. 579-588. 41 ref.
Publisher: American College of Veterinary Pathologists Inc. Lawrence
ISSN: 0300-9858
DOI: 10.1354/vp.42-5-579
CY United States
DT Journal
LA English
ED Entered STN: 2 Mar 2006
Last Updated on STN: 2 Mar 2006

L11 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:906779 CAPLUS <<LOGINID::20080325>>
DN 147:275692
TI Sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and paucibacillary infections
IN Ottenhof, Tom Henricus Maria; Geluk, Annemieke; Pereira Sampaio, Elizabeth
PA Leiden University Medical Center, Neth.
SO PCT Int. Appl., 70pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2007091881	A2	20070816	WO 2006-NL50105	20060428
WO 2007091881	A3	20071129		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,

SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
PRAI EP 2005-103576 A 20050429

L11 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:885718 CAPLUS <<LOGINID::20080325>>
DN 141:363746
TI Development of early-stage ***diagnostic*** method for Johne disease by using anti-IL-10 antibody
AU Momotani, Eiichi; Mori, Yasuyuki
CS Natl. Agric. Bio-oriented Res. Org., Natl. Inst. Animal Health, Tsukuba, 305-0856, Japan
SO BRAIN Techno News (2004), 105, 18-24
CODEN: BTEEEC; ISSN: 1345-5958
PB Nogyo, Seibutsukei Tokutei Sangyo Gijutsu Kenkyu Kiko, Seibutsukei Tokutei Sangyo Gijutsu Kenkyu Shien Senta
DT Journal; General Review
LA Japanese

L11 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:472526 CAPLUS <<LOGINID::20080325>>
DN 139:30816
TI Peptide T and analogs thereof for the stimulation of cytotoxic T lymphocyte (CTL) responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use
IN Ruscetti, Francis W.; Ruff, Michael R.
PA The Government of the United States of America, as Represented by the Secretary Department of Health and Human Services National Institutes of Health, USA
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003050136	A2	20030619	WO 2002-US39109	20021206
WO 2003050136	A3	20031204		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002357093	A1	20030623	AU 2002-357093	20021206
PRAI US 2001-338971P	P	20011207		
WO 2002-US39109	W	20021206		
OS MARPAT 139:30816				

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L11  ANSWER 7 OF 7     MEDLINE on STN
AN   2007416292     MEDLINE <<LOGINID::20080325>>
DN   PubMed ID: 17502388
TI   Influence of Mycobacterium avium subsp.   ***paratuberculosis***   on
     colitis development and specific immune responses during disease.
AU   Singh Udai P; Singh Shailesh; Singh Rajesh; Karls Russell K; Quinn
     Frederick D; Potter Morris E; Lillard James W Jr
CS   Brown Cancer Center, Department of Microbiology and Immunology, University
     of Louisville, 580 S. Preston Street, Baxter II/Room 304C, Louisville, KY
     40202, USA.
NC   AI 57808 (United States NIAID)
     GM 08248 (United States NIGMS)
     MD 000525 (United States NCMHD)
     RR 03034 (United States NCRR)
SO   Infection and immunity, (2007 Aug) Vol. 75, No. 8, pp. 3722-8.  Electronic
     Publication: 2007-05-14.
     Journal code: 0246127. ISSN: 0019-9567.
CY   United States
DT   Journal; Article; (JOURNAL ARTICLE)
     (RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
     (RESEARCH SUPPORT, NON-U.S. GOV'T)
LA   English
FS   Priority Journals
EM   200709
ED   Entered STN: 20 Jul 2007
     Last Updated on STN: 7 Sep 2007
     Entered Medline: 6 Sep 2007


=> s l11 and (anti-interleukin)
L12          0 L11 AND (ANTI-INTERLEUKIN)

=> s l11 and (antibody to interleukin)
L13          0 L11 AND (ANTIBODY TO INTERLEUKIN)

=> s l11 and ((antibody)2w(interleukin))
MISSING OPERATOR ANTIBODY)2W
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l11 and (antibody(2w)interleukin)
L14          0 L11 AND (ANTIBODY(2W) INTERLEUKIN)

=> d kwic l11 1-
YOU HAVE REQUESTED DATA FROM 7 ANSWERS - CONTINUE? Y/(N):y

L11  ANSWER 1 OF 7  BIOSIS  COPYRIGHT (c) 2008 The Thomson Corporation  on STN
TI   Disturbed cytokine response to mycobacterium avium subspecies
       ***paratuberculosis***   is dysregulated in patients with Crohn's
disease.
AB   Background: Mycobacterium avium subspecies   ***paratuberculosis***
     (MAP) has been a source of controversy since it was first suggested as a
     possible cause for Crohn's disease.  While.  .  .  few studies have
     examined the cellular immune response to MAP.  Aim: To compare the
     cellular response to Mycobacterium avium subspecies
       ***paratuberculosis***   between Crohn's disease patients and healthy
```

volunteers. Methods: Peripheral blood mononuclear cells (PBMCs) were isolated from 24 Crohn's disease patients. . .

IT . . .
system, blood and lymphatics, PBMC; phagocytic cell: immune system

IT Diseases
Crohn's disease: digestive system disease, immune system disease, etiology, ***diagnosis***

IT Chemicals & Biochemicals
cytokines; IFN-gamma [***interferon*** -gamma]; IL-10 [***interleukin*** - ***10***]; TNF-alpha [tumor necrosis factor-alpha]; IL-6 [***interleukin*** -6]; IL-8 [***interleukin*** -8]; IL-2 [***interleukin*** -2]; IL-4 [***interleukin*** -4]

ORGN . . .
Primates, Vertebrates

ORGN Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium avium ***paratuberculosis*** (subspecies): pathogen

Taxa Notes
Bacteria, Eubacteria, Microorganisms

L11 ANSWER 2 OF 7 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN

TI Cytokine gene expression in peripheral blood mononuclear cells and tissues of cattle infected with Mycobacterium avium subsp. ***paratuberculosis*** : Evidence for an inherent proinflammatory gene expression pattern.

AB In cattle and other ruminants, infection with the intracellular pathogen Mycobacterium avium subsp. ***paratuberculosis*** results in a granulomatous enteritis (Johne's disease) that is often fatal. The key features of host immunity to M. avium subsp. ***paratuberculosis*** infection include an appropriate early proinflammatory and cytotoxic response (Th1-like) that eventually gives way to a predominant antibody-based response (Th2-like).. . . this shift in the immune response occurs and the underlying molecular mechanisms involved is critical to future control measures and ***diagnosis*** . Previous studies have suggested that M. avium subsp. ***paratuberculosis*** may suppress gene expression in peripheral blood mononuclear cells (PBMCs) from infected cows, despite a continued inflammatory reaction at sites of infection. In the present study, we tested the hypothesis that exposure to M. avium subsp. ***paratuberculosis*** suppresses a proinflammatory gene expression pattern in PBMCs from infected cows. To do this, we examined expression of genes encoding ***interleukin*** -1alpha (IL-1alpha), IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, IL-12p35, IL-16, and IL-18, as well as genes encoding gamma ***interferon*** (IFN-gamma), transforming growth factor beta (TGF-beta), and tumor necrosis factor alpha (TNF-alpha), in PBMCs, intestinal lesions, and mesenteric lymph nodes of cattle naturally infected with M. avium subsp. ***paratuberculosis*** . Cytokine gene expression in these cells and tissues was compared to expression in similar cells and tissues from control uninfected. . . IL-8, and IL-12p35, differential expression in PBMCs from infected and control cattle did not require stimulation with M. avium subsp. ***paratuberculosis*** . In fact, stimulation with M. avium subsp. ***paratuberculosis*** tended to reduce the differential

expression observed in infected and uninfected cows for genes encoding IFN-gamma, IL-1alpha, and IL-6. Only IL-10 gene expression was consistently enhanced by M. avium subsp. ***paratuberculosis*** stimulation of PBMCs from subclinically infected cattle. In ileal tissues from M. avium subsp. ***paratuberculosis*** -infected cattle, expression of the genes encoding IFN-gamma, TGF-beta, IL-5, and IL-8 was greater than the expression in comparable tissues from. . . was lower in tissues from infected cattle than in control tissues. Mesenteric lymph nodes draining sites of M. avium subsp. ***paratuberculosis*** infection expressed higher levels of IL-1alpha, IL-8, IL-2, and IL-10 mRNA than similar tissues from control uninfected cattle expressed. In. . . cattle. Taken together, our results suggest that cells or other mechanisms capable of limiting proinflammatory responses to M. avium subsp. ***paratuberculosis*** develop in infected cattle and that a likely place for development and expansion of these cell populations is the mesenteric. . .

IT . . .
lymph node: blood and lymphatics, digestive system, immune system; peripheral blood mononuclear cell: blood and lymphatics, immune system

IT Diseases
paratuberculosis : bacterial disease, infectious disease, genetics, immunology, Johne's disease
Paratuberculosis (MeSH)

IT Chemicals & Biochemicals
proinflammatory genes: expression pattern

ORGN . . .
Vertebrates

ORGN Classifier
Mycobacteriaceae 08881

Super Taxa
Mycobacteria; Actinomycetes and Related Organisms; Eubacteria; Bacteria; Microorganisms

Organism Name
Mycobacterium avium ssp. ***paratuberculosis*** (subspecies): pathogen

Taxa Notes
Bacteria, Eubacteria, Microorganisms

GEN cattle IFN-gamma gene [cattle ***interferon*** -gamma gene] (Bovidae); cattle IL-1-alpha gene [cattle ***interleukin*** -1-alpha gene] (Bovidae); cattle IL-10 gene [cattle ***interleukin*** - ***10*** gene] (Bovidae); cattle IL-12p35 gene [cattle ***interleukin*** -12p35 gene] (Bovidae); cattle IL-16 gene [cattle ***interleukin*** -16 gene] (Bovidae); cattle IL-18 gene [cattle ***interleukin*** -18 gene] (Bovidae); cattle IL-2 gene [cattle ***interleukin*** -2 gene] (Bovidae); cattle IL-4 gene [cattle ***interleukin*** -4 gene] (Bovidae); cattle IL-5 gene [cattle ***interleukin*** -5 gene] (Bovidae); cattle IL-6 gene [cattle ***interleukin*** -6 gene] (Bovidae); cattle IL-8 gene [cattle ***interleukin*** -8 gene] (Bovidae); cattle TGF-beta gene [cattle transforming growth factor-beta gene] (Bovidae); cattle TNF-alpha gene [cattle tumor necrosis factor-alpha gene] (Bovidae)

L11 ANSWER 3 OF 7 CABA COPYRIGHT 2008 CABI on STN

TI Inflammatory cytokine gene expression in different types of granulomatous lesions during asymptomatic stages of bovine ***paratuberculosis*** .

AB The granulomatous lesions in bovine ***paratuberculosis*** have been classified into two types, i.e., the lepromatous type and the tuberculoid

type. To clarify the immunopathologic mechanisms at. . . the two types of lesions. Samples were obtained from noninfected control cows (n=5) and naturally infected cows (n=7) that were ***diagnosed*** by enzyme-linked immunosorbent ***assay*** (ELISA) and faecal culture test. Although none of the infected cows showed clinical signs, tuberculoid lesions were observed in five. . . and lepromatous lesions in two cows (lepromatous group). Among the cytokines examined by reverse transcription-polymerase chain reaction (RT-PCR), Th2-type cytokines ***interleukin*** -4 (IL-4) and IL-10, and Th1-type cytokine IL-2 were expressed more significantly in the lepromatous group than in the tuberculoid (P<0.01) and noninfected groups (P<0.05). No statistical differences were observed in the expression of ***interferon*** -gamma, IL-1 beta, TNF-alpha, and GM-CSF among lepromatous, tuberculoid, and noninfected groups. Expression of proinflammatory cytokine IL-12 mRNA, however, did not. . . influenced by alterations in Th1/Th2-type cytokine production and that IL-18 may play an important role in a Th1-to-Th2 switch in ***paratuberculosis*** .

CT cows; cytokines; disease course; gene expression; genes; granuloma; histopathology; immunopathology; ***interferon*** ; ***interleukin*** 1; ***interleukin*** ***10*** ; ***interleukin*** 2; ***interleukin*** 4; ***interleukins*** ; messenger RNA; ***paratuberculosis*** ; tumour necrosis factor

ST ***interleukin*** 18

ORGN cattle; Mycobacterium avium subsp. ***paratuberculosis***

L11 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN

TI Sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and paucibacillary infections

AB The current invention discloses new Mycobacterium leprae antigens to be used in methods and means for detection and ***diagnostics*** of M. leprae infections in subjects, in particular in the early stages of infection and in paucibacillary infections, which remain undetected using conventional ***diagnostic*** methods. The antigens disclosed in the invention are specific for M. leprae and the ***diagnostic*** method does not yield 'false pos.' results in individuals having an immune response against other Mycobacterial species, such as M. tuberculosis, M. bovis, M. ***paratuberculosis*** , M. avium, M. smegmatis,, M. ulcerans, M. microti, and M. marinum, or BCG vaccinated individuals. Thus, using bioinformatic anal. the. . . in human leprosy tissue. Paucibacillary and reactional leprosy patients and healthy household contacts of leprosy patients produced significant levels of ***interferon*** (IFN)-.gamma. in response to the five unique M. leprae antigens encoded by ML0576, ML1989, ML1990, ML2283 and ML2567. Provided are. . .

ST sequence Mycobacterium leprae antigen epitope ***diagnoses*** infection; leprosy immunodiagnosis Mycobacterium leprae antigen epitope; vaccine Mycobacterium leprae antigen epitope

IT Receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(4-1BB, anti-4-1BB agonistic antibody as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Human groups

(Brazilian patients; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae,

particularly in early stages and paucibacillary infections)

IT Genetic element

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CpG island, CpG, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Histocompatibility antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, class I, identifying T-cell epitopes for, using computer algorithms; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Histocompatibility antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, class II, identifying T-cell epitopes for, using computer algorithms; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Proteins

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LAG3 (lymphocyte activation gene-3), sol., as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0573, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0574, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0575, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML0576, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens

RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL

(Biological study); USES (Uses)
(ML0576; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1602, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1603, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1604, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1788, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1989, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML1989; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML1990, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use);

PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML1990; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML2283, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML2283; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Gene, microbial
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(ML2567, expressed in human leprosy tissue; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antigens
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ML2567; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Lipopeptides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Pam3Cys, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Immunostimulants
(adjuvants, DA/TDB; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Immunostimulants
(adjuvants, DDA/MPL; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Immunostimulants
(adjuvants; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Monocyte
(anal., in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Diagnostic*** agents
Vaccines
(antigens or epitopes as; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Lipid A
Lipopolysaccharides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Mycobacterium
(as recombinant expression host; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Flagellins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(bacterial, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT CD40 (antigen)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(binding CD40 ligand or antibody, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Mammalia
(***diagnosis*** and therapy; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Mycobacterium avium
Mycobacterium bovis
Mycobacterium marinum
Mycobacterium microti
Mycobacterium smegmatis
Mycobacterium tuberculosis
Mycobacterium ulcerans
(differentiating from; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Leprosy
(early stages ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT T cell (lymphocyte)
(epitopes; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Epitopes
(from ML0576, ML1989, ML1990, ML2283 and ML2567 antigens; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT T cell (lymphocyte)

(helper cell, measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Algorithm
(identifying HLA class I and/or class II T-cell epitopes using; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Diagnosis***
(immunodiagnosis, of ML0576, ML1989, ML1990, ML2283 and ML2567 antigens; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Blood analysis
(in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT ***Interleukin*** ***10***
Interleukin 15
Interleukin 2
Interleukin 4
Interleukin 6
Macrophage inflammatory protein 1.beta.
Transforming growth factor .beta.
Tumor necrosis factors
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Antibodies and Immunoglobulins
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal, anti-4-1BB, agonistic, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Genome
(of M. leprae, identifying unique antigen gene candidates in; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Protein sequences
(of M. leprae-specific antigens ML0576, ML1989, ML1990, ML2283 and ML2567; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT DNA sequences
(of M. leprae-specific genes ML0576, ML1989, ML1990, ML2283 and ML2567; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT Blood cell
(of infected subject, IFN-.gamma. response in; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and

paucibacillary infections)
IT ***Interleukin*** 12
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(p70, measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Human
(patients; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Infection
(paucibacillary, ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Bioinformatics
(sequence annotation, M. leprae unique genes; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Molecular cloning
Mycobacterium leprae
Test kits
(sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Skin
(test, by applying antigen under top skin; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT Mycobacterium BCG
(vaccine, differentiating from; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT ***Interferons***
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.alpha., measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT ***Interferons***
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.beta., measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)
IT ***Interferons***
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(.gamma., measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and

diagnosing M. leprae, particularly in early stages and paucibacillary infections)

IT 141256-04-4, QS21
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MPL, as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-88-2 946442-91-7
RL: PRP (Properties)
(Unclaimed; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and paucibacillary infections)

IT 946400-78-8 946400-79-9 946400-80-2 946400-81-3 946400-82-4
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence, epitope; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-52-0 946442-53-1 946442-54-2 946442-55-3 946442-56-4
RL: ADV (Adverse effect, including toxicity); ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(amino acid sequence; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 24939-03-5, Poly(I:C) 87420-41-5, Pam3Cys 911642-39-2, IC 31
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as adjuvant; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 83869-56-1, GM-CSF
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(measuring response, in ***diagnosis*** ; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-57-5, DNA (Mycobacterium leprae gene ML0576) 946442-58-6, DNA (Mycobacterium leprae gene ML1989) 946442-59-7, DNA (Mycobacterium leprae gene ML1990) 946442-60-0, DNA (Mycobacterium leprae gene ML2283) 946442-61-1, DNA (Mycobacterium leprae gene ML2567)
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(nucleotide sequence; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in early stages and paucibacillary infections)

IT 946442-98-4 946442-99-5 946443-00-1 946443-01-2 946443-02-3 946443-03-4 946443-04-5 946443-05-6 946443-06-7 946443-07-8 946443-08-9 946443-09-0
RL: PRP (Properties)
(unclaimed nucleotide sequence; sequences for Mycobacterium leprae-specific antigens, and methods for treating and ***diagnosing*** M. leprae, particularly in the early stages and

paucibacillary infections)
IT 946442-86-0 946442-87-1 946442-89-3 946442-90-6 946442-92-8
946442-93-9 946442-94-0 946442-95-1 946442-96-2 946442-97-3
RL: PRP (Properties)
(unclaimed protein sequence; sequences for Mycobacterium
leprae-specific antigens, and methods for treating and
diagnosing M. leprae, particularly in the early stages and
paucibacillary infections)

L11 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN
TI Development of early-stage ***diagnostic*** method for Johne disease
by using anti-IL-10 antibody
AB A review on early-stage ***diagnosis*** of Johne's disease (
paratuberculosis) in cattle by modified ***interferon***
.gamma. ELISA ***assay*** using IL-10 neutralizing antibody, and its
effectiveness.
ST review cattle Johne disease ***diagnosis*** ELISA ***interleukin***
10 antibody; ***paratuberculosis*** cattle ***diagnosis***
interferon gamma ELISA review
IT Bos taurus
Mycobacterium avium ***paratuberculosis***
(early-stage ***diagnosis*** method for Johne's disease using
anti-IL-10 antibody)
IT ***Interleukin*** ***10***
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(early-stage ***diagnosis*** method for Johne's disease using
anti-IL-10 antibody)
IT Immunoassay
(enzyme-liked immunosorbent ***assay*** ; early-stage
diagnosis method for Johne's disease using anti-IL-10
antibody)
IT ***Diagnosis***
(immunodiagnosis; early-stage ***diagnosis*** method for Johne's
disease using anti-IL-10 antibody)
IT Infection
(***paratuberculosis*** , Johne's disease; early-stage
diagnosis method for Johne's disease using anti-IL-10
antibody)
IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study,
unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)
(to IL-10; early-stage ***diagnosis*** method for Johne's disease
using anti-IL-10 antibody)
IT ***Interferons***
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(.gamma.; early-stage ***diagnosis*** method for Johne's disease
using anti-IL-10 antibody)

L11 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2008 ACS on STN
TI Peptide T and analogs thereof for the stimulation of cytotoxic T
lymphocyte (CTL) responses and increasing secretion of ***interferon***
.gamma. and ***interleukin*** 2, and therapeutic use
AB . . . in a subject, comprising administering a CTL activity-stimulating
amt. of peptide T or an analog thereof. A method of increasing .gamma.-
interferon (IFN-.gamma.) secretion in a subject comprises

administering an IFN-.gamma. secretion-increasing amt. of peptide T or an analog thereof. A method of increasing ***interleukin*** 2 (IL-2) secretion in a subject comprises administering an IL-2 secretion-increasing amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced CTL activity comprises administering a CTL activity-stimulating amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced IFN-.gamma. activity comprises administering an IFN-.gamma. activity-stimulating amt. of peptide T or an analog thereof. A method of treating a subject ***diagnosed*** as having a disease assocd. with reduced IL-2 activity comprises administering an IL-2 activity-stimulating amt. of peptide T or an. . .

ST peptide T analog cytotoxic T lymphocyte response stimulation; ***interferon*** gamma secretion peptide T; ***interleukin*** 2 secretion peptide T

IT Lymphoma
(B-cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Lymphoma
(T-cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(TNF-.alpha.; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(adenocarcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT AIDS (disease)
(and AIDS-related lymphoma or sarcoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Infection
(bacterial; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(blastoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Urogenital system
(cancer; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Esophagus, neoplasm
Head and Neck, neoplasm
Head and Neck, neoplasm
(carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Uterus, neoplasm

(cervix, carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
Uterus, neoplasm
(cervix; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Intestine, neoplasm
(colon; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Intestine, neoplasm
(colorectal; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT T cell (lymphocyte)
(cytotoxic; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(esophageal; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Mycosis
(fungoides; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neuroglia, neoplasm
(glioblastoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
Carcinoma
(head and neck squamous cell carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
Carcinoma
(head and neck; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(histiocytoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Hypoxia
(hypoxic tumors; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Fungi
Parasite
(infection; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma

(laryngeal squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(metastasis; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Skin, neoplasm
(mycosis fungoides; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Histiocyte
(neoplasm, histiocytoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Nerve, neoplasm
(neuroblastoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Lymphoma
(non-Hodgkin's; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(oral squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Actinobacillus pleuropneumoniae
Adenoma
Alternaria alternata
Anti-AIDS agents
Antibacterial agents
Antimalarials
Antitumor agents
Antiviral agents
Aspergillus fumigatus
Bacillus anthracis
Bladder, neoplasm
Blastomyces dermatitidis
Brain, neoplasm
Brucella
Brucella melitensis
CD8-positive T cell
Campylobacter
Candida albicans
Carcinoma
Carcinoma
Chlamydia pneumoniae
Chlamydia trachomatis
Chlamydophila psittaci
Clostridium
Clostridium tetani
Coccidioides immitis

Coronavirus
Coxiella burnetii
Cryptococcus neoformans
Dengue virus
Eastern equine encephalitis virus
Ebola virus
Ehrlichia
Ehrlichia ruminantium
Entamoeba histolytica
Escherichia coli
Fungicides
Haemophilus
Haemophilus ducreyi
Haemophilus influenzae
Hantavirus
Hematopoietic neoplasm
Hepatitis A virus
Hepatitis B virus
Hepatitis C virus
Hepatitis E virus
Hepatitis delta virus
Histoplasma capsulatum
Hodgkin's disease
Human
Human T-lymphotropic virus 1
Human adenovirus
Human coxsackievirus
Human immunodeficiency virus
Human immunodeficiency virus 1
Human immunodeficiency virus 2
Human papillomavirus
Human poliovirus
Immunostimulants
Influenza A virus
Influenza B virus
Japanese encephalitis virus
Kidney, neoplasm
Lassa virus
Legionella
Legionella pneumophila
Leishmania
Leishmania major
Leukemia
Listeria ivanovii
Listeria monocytogenes
Liver, neoplasm
Lung, neoplasm
Lymphoma
Mammary gland, neoplasm
Mannheimia haemolytica
Marburg virus
Measles virus
Melanoma
Multiple myeloma
Mumps virus
Murray Valley encephalitis virus
Mycobacterium BCG

Mycobacterium africanum
Mycobacterium avium
Mycobacterium avium ***paratuberculosis***
Mycobacterium bovis
Mycobacterium intracellulare
Mycobacterium kansasii
Mycobacterium marinum
Mycobacterium tuberculosis
Mycobacterium ulcerans
Myeloid leukemia
Neisseria gonorrhoeae
Neisseria meningitidis
Neoplasm
Nervous system, neoplasm
Neuroglia, neoplasm
Nocardia
Nocardia asteroides
Ovary, neoplasm
Pancreas, neoplasm
Paracoccidioides brasiliensis
Parasiticides
Pasteurella
Pasteurella multocida
Penicillium marneffei
Plasmodium (malarial genus)
Plasmodium falciparum
Plasmodium malariae
Plasmodium vivax
Pneumocystis carinii
Polyomavirus
Prostate gland, neoplasm
Pseudomonas
Pseudomonas aeruginosa
Rabies virus
Respiratory syncytial virus
Rhinovirus
Rickettsia
Rift Valley fever virus
Rotavirus A
Rotavirus B
Rotavirus C
Rous sarcoma virus
Rubella virus
Salmonella
Salmonella typhi
Sarcoma
Schistosoma
Schistosoma mansoni
Shigella
Simian immunodeficiency virus
Sindbis virus
Skin, neoplasm
St. Louis encephalitis virus
Staphylococcus aureus
Staphylococcus epidermidis
Streptococcus agalactiae
Streptococcus pyogenes

Testis, neoplasm
Toxoplasma gondii
Trypanosoma brucei
Trypanosoma cruzi
Variola virus
Vesicular stomatitis virus
Vibrio cholerae
West Nile virus
Yellow fever virus
Yersinia
Yersinia enterocolitica
Yersinia pestis
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Cytokines
Interleukin 1
Interleukin ***10***
Interleukin 12
Interleukin 13
Interleukin 2
Interleukin 4
Interleukin 6
Interleukin 8

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Peptides, biological studies

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(pulmonary squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Neoplasm
(solid, carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Head and Neck, neoplasm
Head and Neck, neoplasm
Larynx, neoplasm
Lung, neoplasm
Mouth, neoplasm
(squamous cell carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

IT Carcinoma
(squamous cell; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon***

.gamma. and ***interleukin*** 2, and therapeutic use)
IT Pharynx, neoplasm
(throat squamous cell carcinoma; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT Infection
(viral; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT ***Interferons***
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.gamma.; peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT 106362-32-7D, C-terminal derivs.
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT 106362-32-7, Peptide T 106362-32-7D, Peptide T, analogs
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide T and analogs for stimulation of cytotoxic T lymphocyte responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)
IT 107531-09-9 107531-11-3 107531-12-4 107531-14-6 118936-25-7 118936-26-8 118936-27-9 118936-30-4 118936-31-5 118936-32-6 118957-86-1 119386-95-7
RL: PRP (Properties)
(unclaimed sequence; peptide T and analogs thereof for the stimulation of cytotoxic T lymphocyte (CTL) responses and increasing secretion of ***interferon*** .gamma. and ***interleukin*** 2, and therapeutic use)

L11 ANSWER 7 OF 7 MEDLINE on STN
TI Influence of Mycobacterium avium subsp. ***paratuberculosis*** on colitis development and specific immune responses during disease.
AB . . . and intramural inflammation observed in cases of inflammatory bowel diseases (IBD) and veterinary Johne's disease suggests that Mycobacterium avium subsp. ***paratuberculosis*** is a causative agent. However, an incomplete understanding of the immunological steps responsible for the pathologies of IBD makes this conclusion uncertain. Sera from ***interleukin*** - ***10*** -deficient (IL-10(-/-)) mice with spontaneous colitis displayed significantly higher M. avium subsp. ***paratuberculosis*** -specific immunoglobulin G2a antibody responses than did sera from similar mice without disease. Pathogen-free IL-10(-/-) mice received control vehicle or the vehicle containing heat-killed or live M. avium subsp. ***paratuberculosis*** . Mucosal CD4(+) T cells from the mice that developed colitis proliferated and secreted higher levels of gamma ***interferon*** and tumor necrosis factor alpha after ex vivo stimulation with a Vbeta11(+) T-cell receptor-restricted peptide from the MPT59 antigen (Ag85B). . .
CT . . .

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Antigens, Bacterial: IM, immunology
      CD4-Positive T-Lymphocytes: IM, immunology
      Colitis: IM, immunology
     *Colitis: MI, microbiology
     *Colitis: PA, pathology
      Disease Models, Animal
         *** Enzyme-Linked Immunosorbent Assay***
      Humans
      Immunoglobulin G: BL, blood
         *** Interferon Type II: BI, biosynthesis***
         *** Interleukin-10: DF, deficiency***
      Intestinal Mucosa: IM, immunology
      Ligands
      Mice
      Mice, Knockout
         ****Mycobacterium avium subsp. paratuberculosis: IM, immunology***
         ****Paratuberculosis: IM, immunology***
         ****Paratuberculosis: PA, pathology***
      Peptides: IM, immunology
      Receptors, Antigen, T-Cell: IM, immunology
      Receptors, CXCR3
      Receptors, Chemokine: AG, agonists
      Receptors, Chemokine: IM, immunology
.  .  .
RN     ***130068-27-8 (Interleukin-10)***  ;   ***82115-62-6 (Interferon Type***
  ***     II)***
CN.  .  .  0 (Peptides); 0 (Receptors, Antigen, T-Cell); 0 (Receptors, CXCR3);
     0 (Receptors, Chemokine); 0 (Tumor Necrosis Factor-alpha); 0 (antigen 85B,
     Mycobacterium   ***paratuberculosis***  )
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